PARTS MANUAL

942220E
ZT219 19HP KAW W/48 SIDE DISCHARGE

942221E
ZT219 19HP KAW W/52 SIDE DISCHARGE

942233E
ZT225 25HP KAW W/61 SIDE DISCHARGE

942244E
ZT225 25HP KAW W/52 SIDE DISCHARGE

942237E
ZT227 27HP KLR W/61 SIDE DISCHARGE

942248E
ZT221 21HP KAW W/52 SIDE DISCHARGE

942249E
ZT227 27HP KAW W/61 SIDE DISCHARGE

CGC
Commercial Grounds Care, Inc.

MAN 4163279
Rev. A 01-2008

OPERATOR'S MANUAL 4163280

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Californie Proposition 65 Avertissement

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

⚠ AVERTISSEMENT

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

California Advertencia

de la Proposicion 65

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

⚠ ADVERTENCIA

El estado de California hace saber que los gases de escape de este producto contienen productos quÍmicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

CALIFORNIA

Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **WASH HANDS AFTER HANDLING.**

ZT 200 Series

IMPORTANT MESSAGE

Thank you for purchasing this CGC, Inc. product. You have purchased a world class mowing product, one of the best designed and built anywhere.

This machine comes with an Operation and Safety Manual and a separate Setup, Parts and Maintenance Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand these manuals. Treat your machine properly, lubricate and adjust it as instructed, and it will give you many years of reliable service.

Your safe use of this CGC, Inc. product is one of our prime design objectives. Many safety features are built in, but we also rely on your good sense and care to achieve accident-free operation. For best protection, study the manuals thoroughly. Learn the proper operation of all controls. Observe all safety precautions. Follow all instructions and warnings completely. Do not remove or defeat any safety features. Make sure those who operate this machine are as well informed and careful in its use as you are.

See a CGC, Inc. dealer for any service or parts needed. CGC, Inc. service ensures that you continue to receive the best results possible from CGC, Inc. products. You can trust CGC, Inc. replacement parts because they are manufactured with the same high precision and quality as the original parts.

CGC, Inc. designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this machine only as directed in the manuals, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

Commercial Grounds Care, Inc.
One Bob Cat Lane
Johnson Creek, WI 53038-0469

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NOTICE !!!

Unauthorized modifications may present **extreme** safety hazards to operators and bystanders and could also result in product damage.

Commercial Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by CGC, Inc. Engineering Department. Any CGC, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture-including the addition of "after-market" accessories or component parts not specifically approved by CGC, Inc.-will result in the CGC, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by CGC, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. CGC, Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.

This Operator's Manual should be regarded as part of the machine. Suppliers of both new and second-hand machines must make sure that this manual is provided with the machine.

¡LEA EL INSTRUCTIVO!

Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

This symbol means:
ATTENTION!
BECOME ALERT!

Your safety and the safety of others is involved.

Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to CGC, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

⚠DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

⚠WARNING

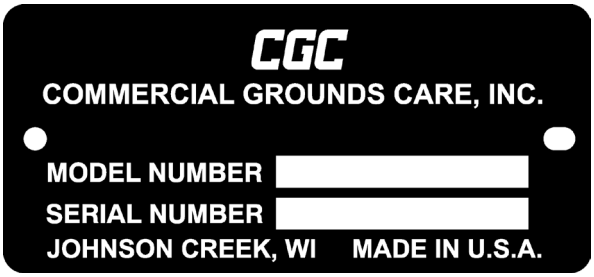
WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

⚠CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, **MAY** result in property damage



MODEL NUMBER: This number appears on sales literature, technical manuals and price lists.

SERIAL NUMBER: This number appears only on your mower. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

TOOLS REQUIRED FOR ASSEMBLY

- Wrecking bar
- Claw hammer
- Ratchets: 3/8”
- Sockets: 3/8”, 1/2”, 17 mm
- Wrenches: 13 mm, 15 mm, 17 mm, 18 mm, 1-1/16”, 1-1/8”
- Straight edge
- Tire pressure gauge
- Blocks (for deck leveling)

NOTE: All references below to the “right” or “left” are with respect to an operator at the controls.

1. **UNCRATE UNIT**

a) Discard packing materials. Remove and discard shipping brackets. Tighten caster wheel axle bolts against caster axle spanner bushings.

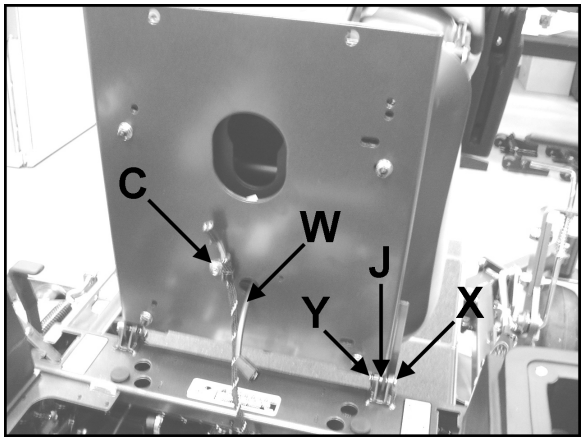
2. **INSTALL SEAT**

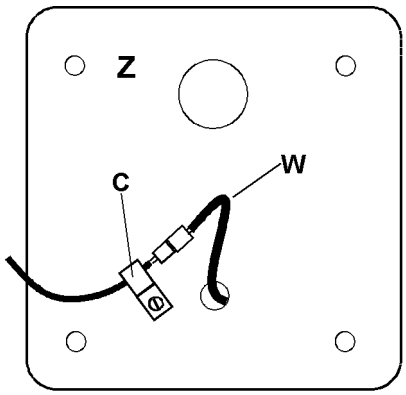
a) Install bushings **J** in seat plate **Z**.

b) Install seat assembly onto the unit using (2) pins **X** and (2) E-clips **Y**.

c) Secure seat wire **W** on the bottom of the seat plate with clip **C** and a 1/4-20 X 3/8” thread forming screw.

d) Connect the tractor harness to the seat wire.





Bottom of seat plate **Z** showing clip **C**

3. Set tire pressures to 14 lbs/in^2 (1.0 kg/cm^2). Tires are overinflated for shipping.

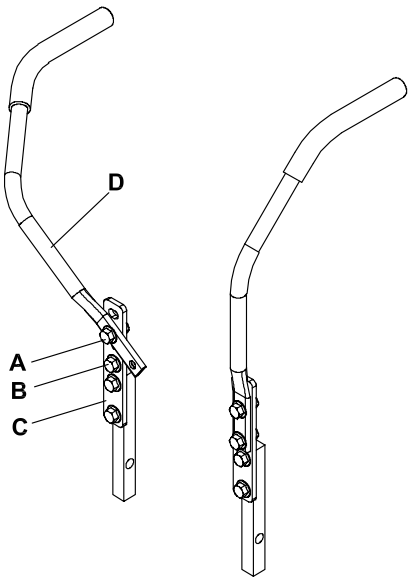
4. **TRACTION LEVERS**

a) Loosen bolt **A** and remove bolt **B**.

b) Rotate traction lever **D** into position and secure with bolts **A** and **B**. Repeat for the other lever.

c) Tighten all fasteners.

d) Sit on the machine. Levers may be adjusted in bracket **C** for a more comfortable reach, or moved to upper set of holes for a better operator fit.

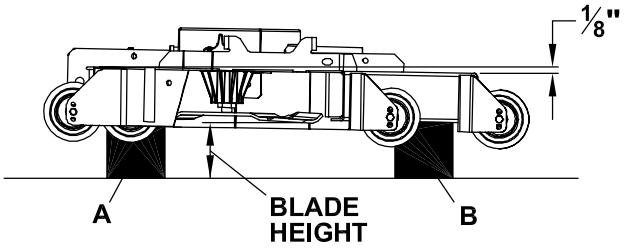


5. **DECK LEVELING**

a) Park the machine on a smooth, level surface. Raise the deck to the transport position.

b) Lower the deck onto a set of equal height blocks **A** under the rear corners of the deck. Place another set of blocks **B** under the front of the deck so that the deck top is pitched forward 1/8".

NOTE: The front and rear of the deck are at different heights.

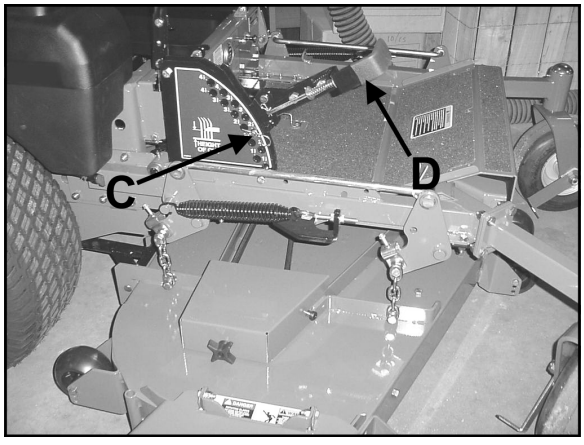


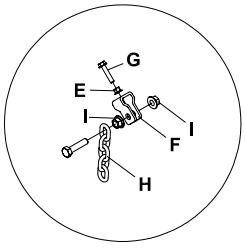
c) Measure the height of the blade cutting edge above the ground. Remove pin **C** and set the height of cut lever **D** to that height.

d) Loosen nuts **I** at all four corners of the deck.

NOTE: This will relieve tension on chains **H**.

e) Loosen the jam nuts **E** on the height of cut clips **F** and adjusting screws **G**. Turn the adjusting screws **G** until the play is taken out of the chains **H** at all four corners. Tighten the jam nuts **E** against the clips **F** and at the adjusting screws **G**. Retighten nuts **I** at this time.





6. **COUNTERBALANCE SPRINGS**

a) Raise the cutterdeck all the way.

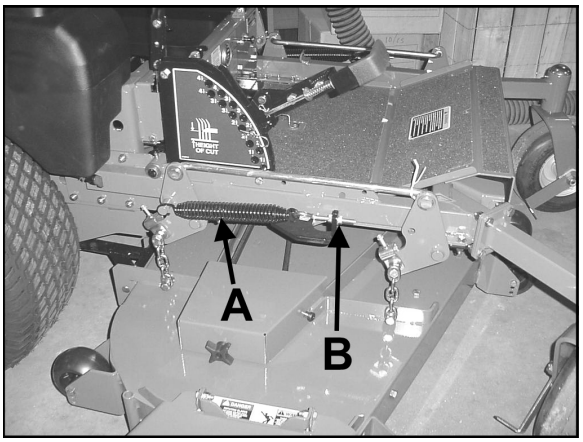
b) Adjust the spring **A** with nut **B**:

52” cutterdecks to a length of 9-1/8” (232 mm)

61” cutterdecks to a length of 9-9/16” (242 mm)

The springs may be tightened or loosened from this point according to personal preference.

NOTE: The 48” cutterdecks **do not** have counterbalance springs.



7. **FINAL PREPARATIONS**

- Check the engine and hydraulic oil levels. Top up with the correct oil if necessary. Use 10W30 motor oil for the engine. Use fresh, clean 15W40 or 20W50 motor oil or 15W50 synthetic motor oil for the hydraulic system.
- Remove the battery from the machine. Fill the battery to the bottom of the vent wells with acid and trickle charge for several hours.

⚠WARNING Battery acid is caustic and fumes are explosive and can cause serious injury or death.

Use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. Read and obey the battery manufacturer’s instructions.

Be certain the ignition switch is OFF and the key has been removed before servicing the battery.

a) Verify battery polarity before connecting or disconnecting the battery cables.

b) When installing the battery, always assemble the RED, positive (+) battery cable first and the ground, BLACK, negative (-) cable last.

c) Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep terminal covers in place.

- Read Operation and Safety Manual before starting.
- Run engine at full RPM for 5 minutes before engaging blades to allow the engine to be fully lubricated before load is applied.
- Check the hydrostat neutral adjustment. Neutral is set at the factory but may require readjustment if air trapped during the initial oil fill has worked out of the system. See adjustments section later in this manual.
- Do not use the machine without an approved grass collector, the grass discharge chute or mulching plates correctly fitted.

MAINTENANCE OPERATION	Maintenance is an ongoing job. These intervals are maximum times between maintenance operations. Perform more often under severe conditions.						
	FIRST 5 HOURS	DAILY	EVERY 25 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	EVERY 200 HOURS	EVERY 500 HOURS
ENGINE Consult the engine manual for additional information and instructions							
Check/Top Off Engine Coolant Level (Where Applicable)		X					
Check/Top Off Oil Level		X					
Check For Leaks		X					
Clean Air Intake Screen		X					
Clean Air Cleaner Precleaner			X*				
Clean Air Cleaner Element					X	X**	
Clean Cooling Fins					X		
Change Oil And Filter	X	See engine manufacturer's manual					
Check/Replace Spark Plugs						X	
* N/A IF EQUIPPED WITH HEAVY DUTY CYCLONIC AIR CLEANER **IF EQUIPPED WITH HEAVY DUTY CYCLONIC AIR CLEANER							
HYDRAULICS							
Check For Leaks		X					
Check/Top Off Oil Level					X		
Change Oil And Filter	X						X
MACHINE							
Check Interlock Operation		X					
Check Tire Pressures		X					
Check/Top Off Battery					X		
Lubricate All Points				X			

NOTES

GENERAL	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS
Check Tire Pressures												
Lubricate All Points												
Check Nuts & Bolts												
ENGINE												
Check Engine Coolant Level (Where Applicable)												
Check Oil Level												
Change Oil												
Clean Air Cleaner Element												
Clean Cooling Fins												
Replace Air Cleaner Element												
Clean & Gap Spark Plugs												
NOTE: After first 5 hours of operation replace engine oil, hydraulic oil and both filters.												

CHECK DAILY

Operator Presence Interlock System - Start Operation

For the engine to crank, the parking brake must be on, the PTO (blades) off and traction levers in the neutral lock position. Sit in the seat and check, one by one, if the engine will crank with the parking brake off, the blades on, and either traction lever out of neutral lock. Also, make sure engine coolant temperature gauge light flashes upon turning key to the **ON** position.

Operator Presence Interlock System - Run Operation

The operator must be in the seat for the engine to run with the parking brake off, the traction levers moved out of the neutral lock position, or the blades on. To check:

1. Start the engine and run at 1/2 throttle with the operator on the machine but raised off the seat.
2. One by one: move the parking brake to the OFF position, traction levers out of the neutral lock position (check each independently), and turn the blades on. Each check should kill the engine after 1/2 second. (A 1/2 second delay is built into the system to prevent engine cutout when traversing rough terrain.)

Repair machine before using if the Operator Presence Interlock System does not operate correctly in start or run. Contact your authorized CGC, Inc. dealer.

Hardware

Tighten any nuts and bolts found loose. Replace any broken or missing cotter pins. Repair any other problems before operating.

Tire pressure

Tires should be kept inflated at 14 lbs/in^2 (1.0 kg/cm^2). Improper tire inflation can cause rapid tire wear and poor traction. Uneven inflation can cause uneven cutting.

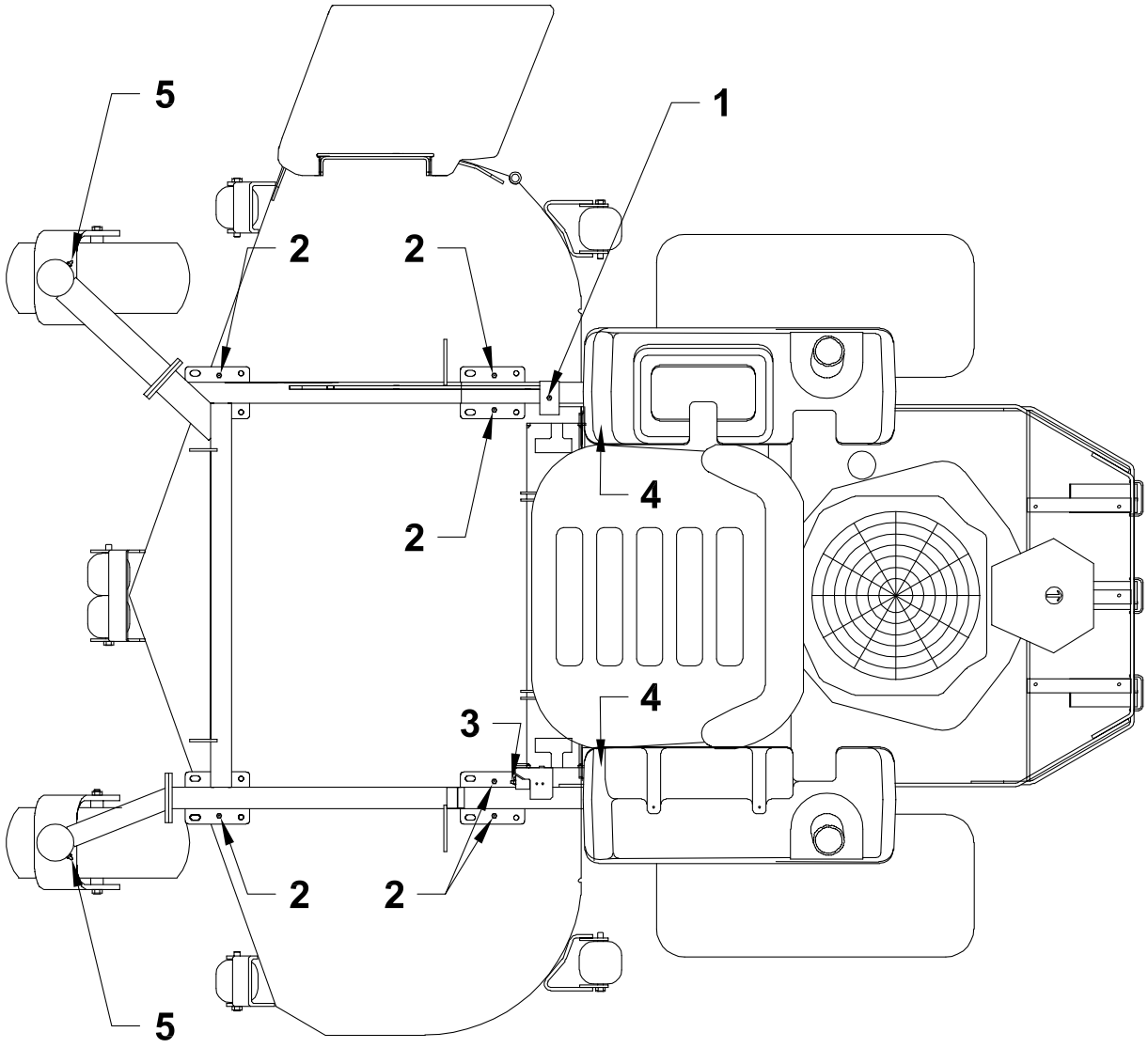
BATTERY

⚠WARNING Battery acid is caustic and fumes are explosive and can cause serious injury or death.

Use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. Read and obey the battery manufacturer's instructions.

Be certain the ignition switch is OFF and the key has been removed before servicing the battery.

1. Verify battery polarity before connecting or disconnecting the battery cables.
2. When installing the battery, always assemble the RED, positive (+) battery cable first and the ground, BLACK, negative (-) cable last.
3. When removing the battery, always remove the ground, negative (-) cable first and the red, positive (+) cable last.
4. Check the electrolyte level every 100 hours of operation.
5. Clean the cable ends and battery posts with steel wool. Use a solution of baking soda and water to clean the battery. Do not allow the solution to enter into the battery cells.
6. Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep terminal covers in place.



LUBRICATION

Every 50 hours of operation, lubricate the following points (1-4) with grease:

1. Deck lift rockshaft (1 point)
2. Deck lift pivots (6 points)
3. Brake lever pivot (1 point)
4. Push arms (2 points located at rear of cutterdeck under each fuel tank)
5. Caster wheel pivots (2 points)
   (Lubricate every 500 hours or once a year)

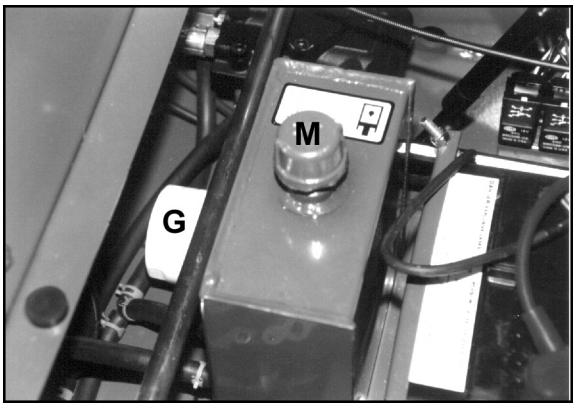
NOTE ON BLADE SPINDLES - The blade spindles on these machines use a superior sealed bearing that does not require relubrication.

HYDRAULIC SYSTEM

Fluid level in the hydraulic system should be checked after the first 5 hours of operation, and every 100 hours thereafter, or when a leak has occurred. If the fluid is low, check all components for leaks.

To check, remove reservoir cap **M**. The fluid level should be at the bottom of the filler tube. If low, top up (do not overfill). Use one of the oils listed below:

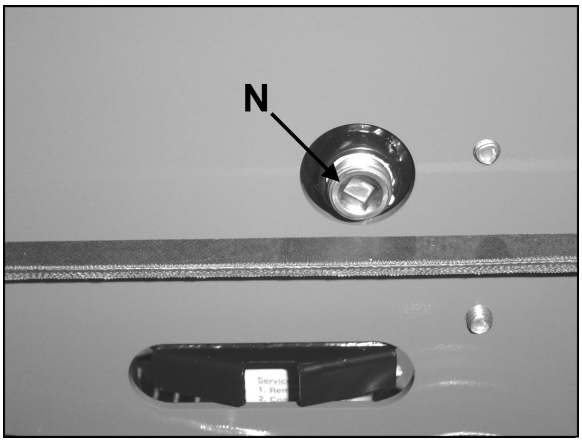
- SAE 15W40 motor oil
- SAE 20W50 motor oil
- 15W50 synthetic motor oil



View from right side

AFTER FIRST FIVE (5) HOURS

1. Remove plug **N** to drain hydraulic reservoir. Dispose of used oil in accordance with local requirements.
2. Clean and replace the plug.
3. Change hydraulic oil filter **G**.
4. Fill the reservoir with fresh oil to the bottom of the reservoir filler tube, using an oil from the list above. Do not overfill.



View from below machine

PERIODIC OIL CHANGES

Change the hydraulic fluid and hydraulic filter after each 500 hours of operation using the same procedure given above.

NOTES:

Before servicing the hydraulic system, stop the engine, disconnect spark plug wires and disengage the PTO.

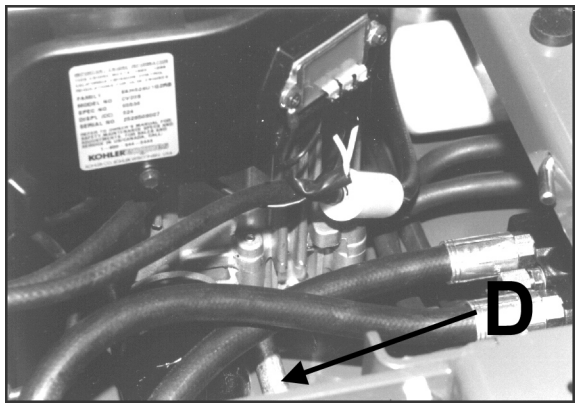
- After any hydraulic line is opened, plug or cap it promptly to reduce the risk of contamination.
- Do not use sealant tape on hydraulic pipe fittings. Use a liquid sealant that will dissolve into the system.
- Make sure all hydraulic connections are tight and hydraulic hoses and lines are in good condition before applying pressure to system.

⚠WARNING

The machine's hydraulic system operates under high pressure. When checking for leaks, do not use your hands to attempt to find a leak. Instead, use cardboard or paper. Escaping hydraulic fluid can be under sufficient pressure to penetrate skin and cause serious injury. If hydraulic fluid is injected into the skin, it must be promptly removed by a doctor familiar with this form of injury or gangrene may result.

ENGINE OIL

Do not perform engine maintenance without the engine off, spark plug wires disconnected and PTO disengaged.



AFTER FIRST FIVE (5) HOURS

While the engine is warm:

1. Remove drain cap **D** and drain the crankcase. Dispose of used oil in accordance with local requirements.
2. Clean and replace the cap.
3. Change oil filter.
4. Fill the crankcase with fresh oil to the full mark. Do not overfill. See engine manual for oil specifications.

DAILY

1. Check oil level with the dipstick.
2. If oil is needed, add fresh oil of proper viscosity and grade. See engine manual for oil specifications. Do not overfill.
3. Replace dipstick before starting engine.

PERIODIC OIL CHANGES

1. See engine manual for oil and filter change intervals after the break-in period.
2. Follow instructions for first oil change, above.

SPARK PLUGS

Remove each plug and check condition.

- Good operating conditions are indicated if the plug has a light coating of grey or tan deposit.
- A white blistered coating indicates overheating. A black coating indicates an “over rich” fuel mixture. Both may be caused by a clogged air cleaner or improper carburetor adjustment.
- Do not sandblast, wire brush or otherwise attempt to repair a plug in poor condition. Best results are obtained with a new plug.
- Set plug gap as specified in engine manual.

FUEL FILTER (CARBURETED MODELS)

An inline fuel filter is located in the fuel supply line. Inspect at every oil change to make sure it is clean and unobstructed. Replace if dirty.

DUAL ELEMENT AIR CLEANER

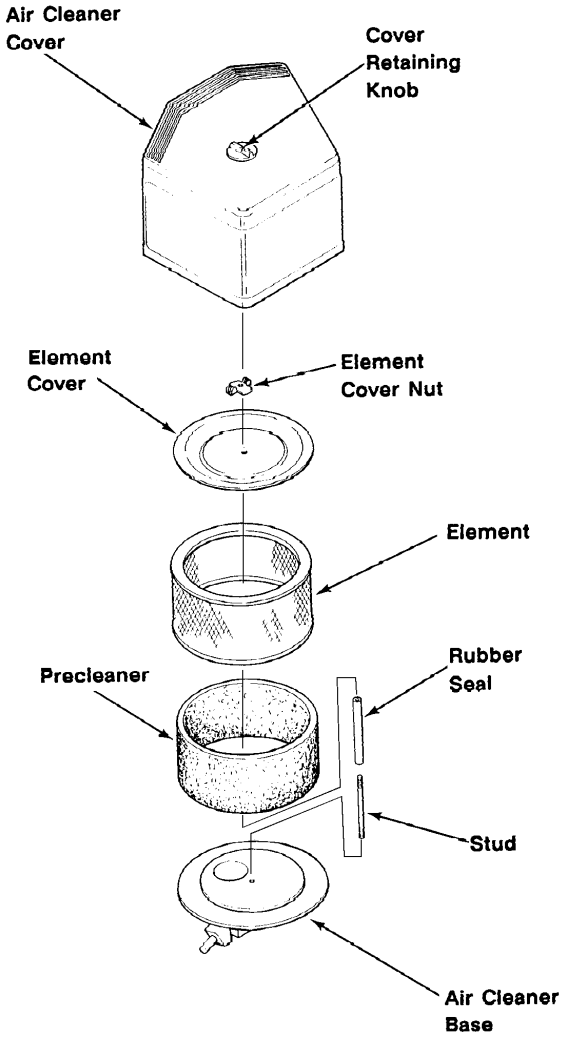
Engines equipped with dual element air cleaners have a paper air cleaner element with an oiled, foam precleaner element on the dirty side of the paper element. Both should be inspected regularly and maintained.

Clean and re-oil precleaner element every 25 hours (more often under dusty conditions).

1. Disassemble air cleaner cover.
2. Remove precleaner by sliding it off the paper cartridge.
3. Wash precleaner in kerosene or liquid detergent and water.
4. Wrap precleaner in cloth and squeeze to remove cleaner.
5. Saturate precleaner in engine oil. Squeeze to remove excess oil.
6. Re-install precleaner over paper cartridge. Reassemble air cleaner components and screw assembly down tight.

Every 100 hours (more often under very dusty or dirty conditions), check the paper cartridge.

- Clean by tapping gently.
- Do not wash the cartridge or use compressed air which can cause damage.
- Replace when cartridge is dirty, bent or damaged.



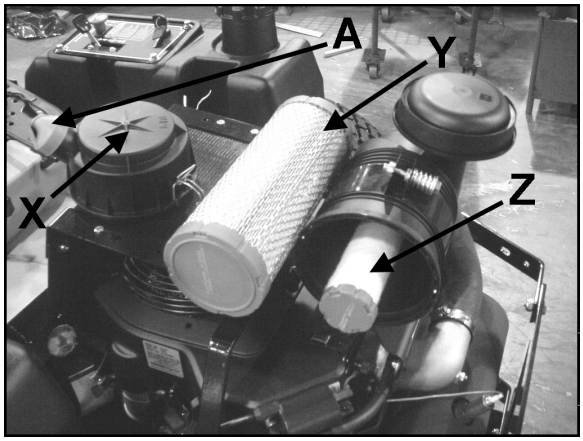
HEAVY DUTY CYCLONIC AIR CLEANER

Clean and replace the air cleaner element as specified in the service chart. Uneven running, lack of power or black exhaust fumes may indicate a dirty air cleaner.

To replace air cleaner elements:

1. Unclamp end cover **X** and remove existing cleaner elements.

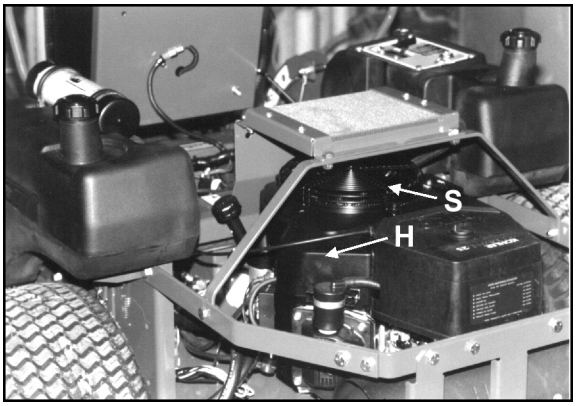
2. Insert new elements **Y** and **Z** and replace cover. Ensure the breathing port **A** is pointing down and towards the front of the tractor.



ENGINE COOLING

Continued operation with a clogged cooling system will cause severe overheating and can result in engine damage.

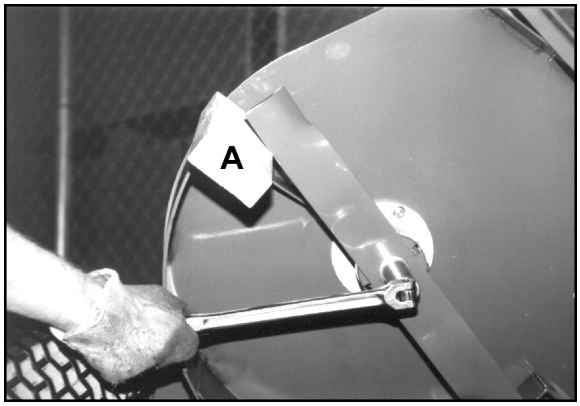
- **Daily**: Clean air intake screen **S**.
- **Every 100 hours**: Clean cooling fins beneath blower housing **H** with reference to information in the engine manufacturer's manual.



BLADE REMOVAL

Follow these instructions to prevent injury during blade removal:

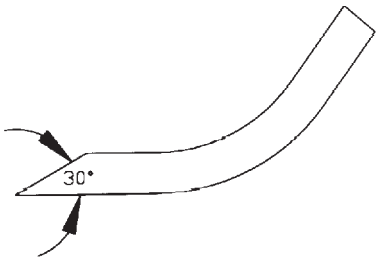
1. Loosen with a box wrench or a socket and long breaker bar. To gain additional leverage, slip a long pipe or thick-walled tube over breaker bar or wrench.
2. Insert wood block **A** as shown, with grain perpendicular to blade, to prevent blade from turning when loosening.
3. Wear thickly padded gloves. Keep hands clear of blade path. Blades may rotate when bolt releases.



SHARPENING

Blades may be sharpened by filing or grinding.

- Inspect blades before sharpening.
- Replace bent or cracked blades.
- Replace blades when the lift portion has worn thin.
- Maintain cut angle at 30°.
- Do not overheat blades when sharpening.
- Always use CGC, Inc. blades. Use of another manufacturer's blades may be dangerous.



BLADE BALANCE

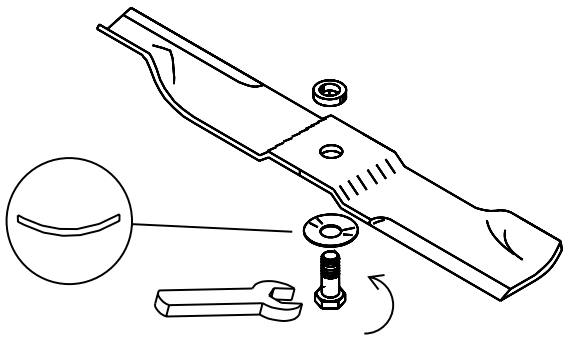
Blade balance must be maintained at 5/8 oz-in (19.4 g-cm) or less. Failure to keep blades balanced causes excess vibration, wear, and shortened life of most components of the machine.

To balance a blade:

1. Sharpen blade first.
2. Balance the blade at the center.
3. Attach a 1/8 oz (3.9 g) weight at a distance 5" (127 mm) from center on the light end. This should make the light end the heavy end:
   - If it does, the blade is balanced.
   - If does not, file or grind the heavy end until the addition of the weight makes the light end the heavy end.

BLADE INSTALLATION

1. Wear thickly padded gloves to prevent cuts from the sharp blade.
2. Insert the blade bolt, in order, through the conical washer (cup side toward the blade, as shown), the blade, and the blade spacer.
3. Install assembly on the blade spindle.
4. Torque the blade bolt to 70 ft-lbs.



DECK LEVELING

a) Park the machine on a smooth, level surface. Raise the deck to the transport position.

b) Lower the deck onto a set of equal height blocks **A** under the rear corners of the deck. Place another set of blocks **B** under the front of the deck so that the deck top is pitched forward 1/8".

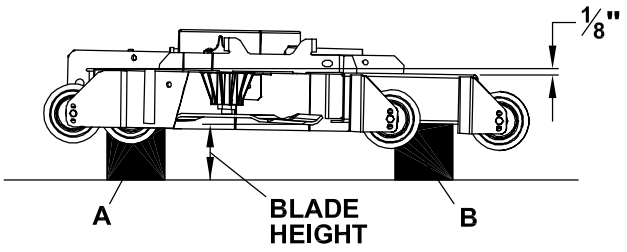
NOTE: The front and rear of the deck are at different heights.

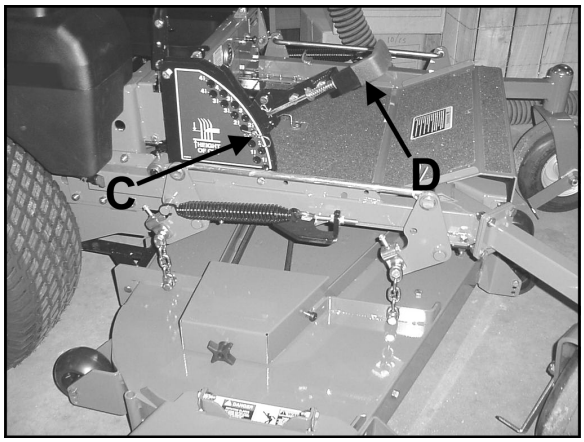
c) Measure the height of the blade cutting edge above the ground. Remove pin **C** and set the height of cut lever **D** to that height.

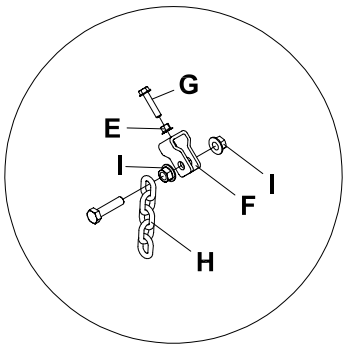
d) Loosen nuts **I** at all four corners of the deck.

NOTE: This will relieve tension on chains **H**.

e) Loosen the jam nuts **E** on the height of cut clips **F** and adjusting screws **G**. Turn the adjusting screws **G** until the play is taken out of the chains **H** at all four corners. Tighten the jam nuts **E** against the clips **F** and at the adjusting screws **G**. Retighten nuts **I** at this time.







COUNTERBALANCE SPRINGS

a) Raise the cutterdeck all the way.

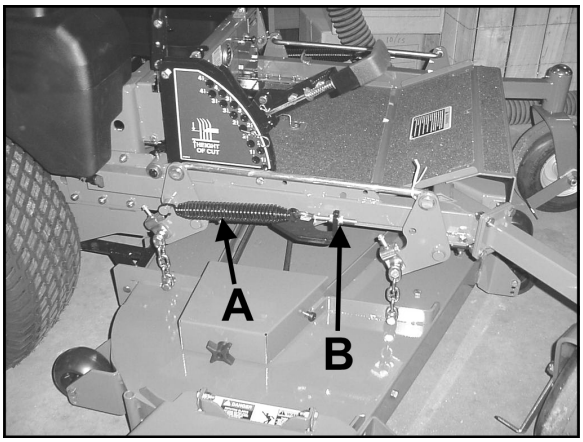
b) Adjust the spring **A** with nut **B**:

52" cutterdecks to a length of 9-1/8" (232 mm)

61" cutterdecks to a length of 9-9/16" (242 mm)

The springs may be tightened or loosened from this point according to personal preference.

NOTE: The 48" cutterdecks **do not** have counterbalance springs.



HEIGHT OF CUT

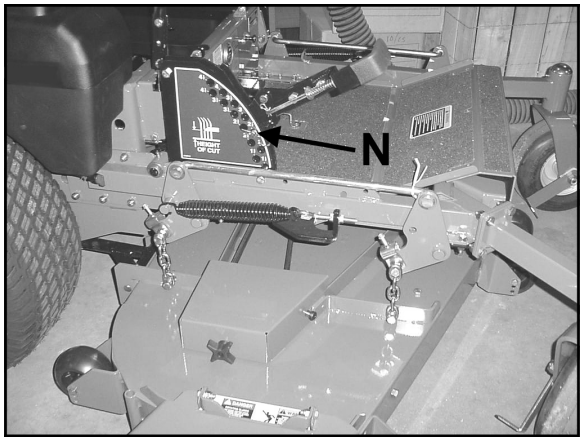
The height of cut is set by moving height of cut pin **N** to the hole designated for the height of cut desired.

To change the height of cut:

1. Lift the deck to the highest position.
2. Move pin **N** to the selected hole.
3. Lower the deck until the lift lever is stopped by the pin.

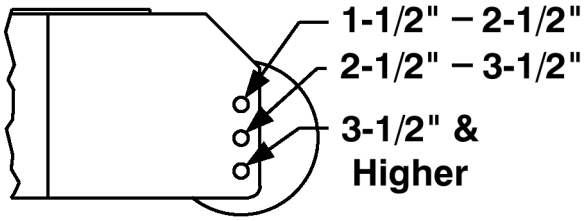
NOTES:

- Height of cut may vary due to the amount of tread on the tires, tire diameter or inflation pressure.
- For best results, adjust the rear deck rollers for the height of cut to be used (see below).



REAR DECK ROLLERS

The rear outside deck rollers are adjustable up and down to provide improved deck flotation and scalping protection at various heights of cut. They are not intended to ride continuously on the ground. Adjust no closer than 3/8” (10mm) to the ground.



Height of cut ranges for roller adjustment

BELTS

All belts are tensioned by spring loaded idlers. No adjustment is required.

CONTROL LEVERS

There are two mounting positions for the control levers, upper and lower. The lower position works well for most people. Taller operators may need the upper position.

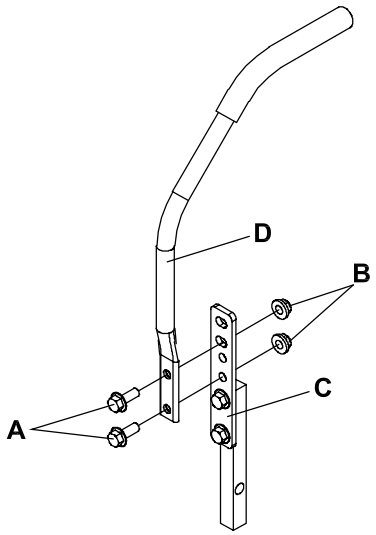
To adjust the height of the control levers:

- Remove bolts **A** and nuts **B**.
- Align holes in control lever **D** with appropriate holes in traction lever bracket **C**.
- Install bolts **A** and nuts **B**.

The upper mounting hole for the control levers is slotted to allow fore-aft adjustment and to allow alignment of the levers.

To adjust or align the control levers:

- Loosen nuts **B**.
- Adjust control lever position.
- Tighten nuts **B**.



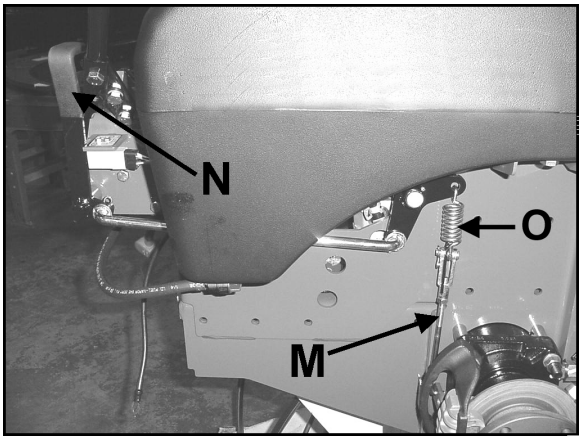
PARKING BRAKE

Park machine on a smooth level surface.

Support the machine with the rear wheels off the ground, using jack stands or equivalent. DO NOT rely on mechanical or hydraulic jacks.

1. Remove rear wheels.
2. Measure spring length **O** with parking brake **N** in the OFF position.
3. Move parking brake **N** to the ON position and measure length of spring **O** again. When spring deflects 3/8” it is properly adjusted.
4. If adjustment is required, return parking brake **N** to the OFF position.
5. Disconnect one end of rod **M** at the brake and loosen jam nut.
6. Adjust rod **M** in or out as required until 3/8” deflection in brake spring **O** is achieved with parking brake **N** in the ON position.
7. Reconnect rod M and retighten jam nut.
8. Repeat steps 2-7 on opposite side of machine.
9. Replace wheels and tighten wheel nuts.

NOTE: Parking brake must be in the OFF position to properly seat brake drums.



Parking brake assembly (tire and deck not shown for clarity - brake in ON position).

This adjustment will cause the brake springs to stretch 3/8” when the parking brake is in the ON position, providing the correct parking brake force without overloading the brake arm.

HYDROSTAT ADJUSTMENTS

A turnbuckle-style hydrostat neutral adjustment is provided.

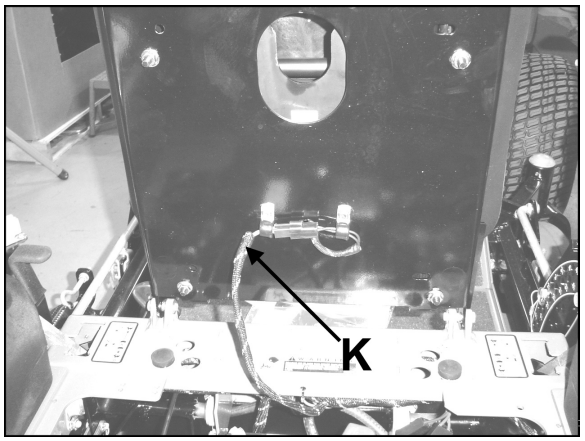
Neutral:

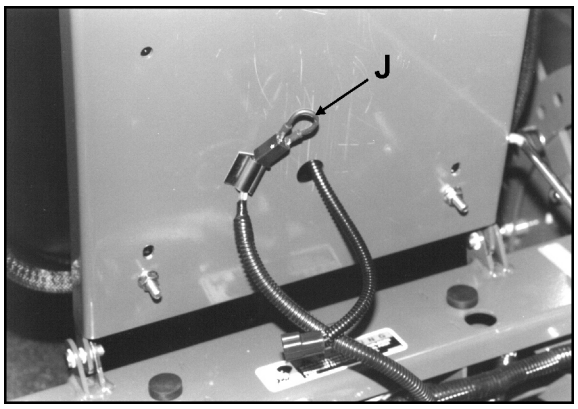
1. Support the machine with the rear wheels off the ground. Use jackstands or equivalent support. Do not rely only on mechanical or hydraulic jacks.
2. Move the traction levers out into the neutral lock position and raise the seat.
3. Disconnect the seat switch wire **K** and temporarily connect the two terminals with jumper wire **J** as shown.
4. Start the engine and run at low speed.
5. Loosen jam nuts **T** at both ends of the turnbuckle.
6. Rotate the turnbuckle until the corresponding wheel stops turning. Lock the turnbuckle jam nuts. Run the engine up to high idle to check the adjustment. Readjust if necessary.
7. Repeat steps 5 and 6 for the opposite side.
8. Remove the jumper wire and reconnect the seat switch.

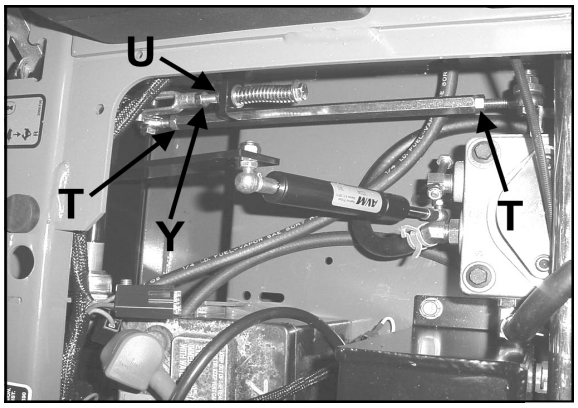
Reverse Return:

1. Move traction levers out to the neutral lock position and raise the seat.
2. Locknut **U** should be run on the bolt as far as it will go.
3. Loosen jam nut **Y**. Adjust the clevis yoke by turning the head of the bolt until the clevis pin just makes contact with the rear of the slot in the lever it connects with. Tighten jam nut **Y**.
4. Repeat steps 2 and 3 for the opposite side.

NOTE: A slight creep in reverse is acceptable provided the wheel does not turn and the hydrostat pump does not whine when the parking brake is on.





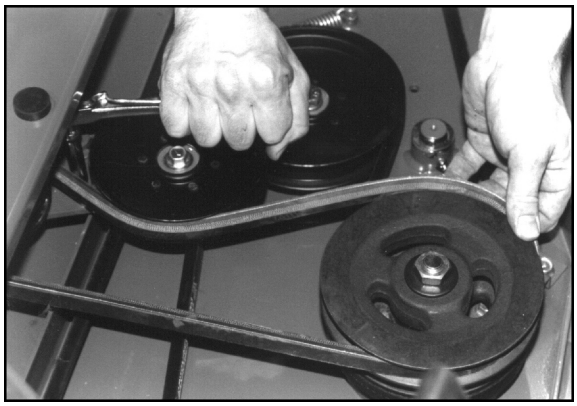


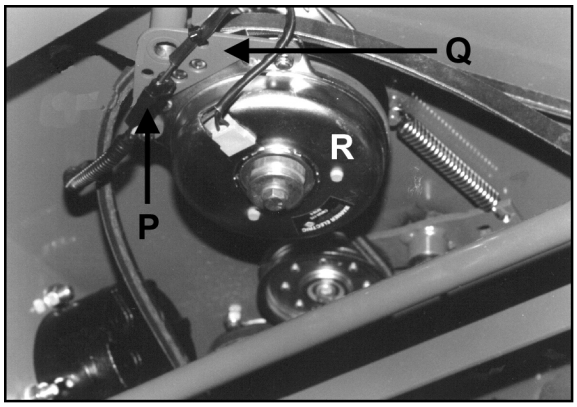
Right side adjustments
(wiring harness and seat rod removed for clarity)

Note: Always use CGC, Inc. replacement belts, not general purpose belts. CGC, Inc. belts are specially designed for use on commercial mowers and will normally last longer.

ENGINE-CUTTERDECK (PTO) BELT

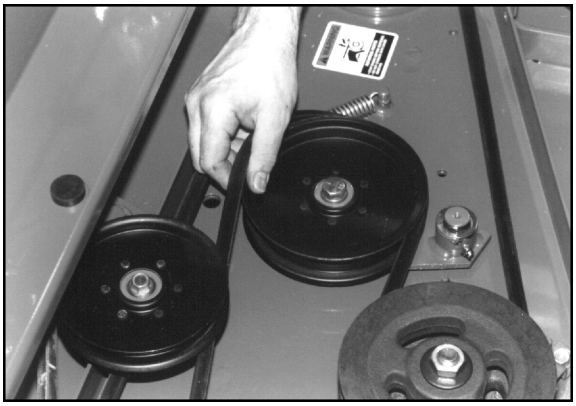
1. Set the cutterdeck in the lowest height-of-cut position.
2. Attach a short extension to a 3/8” drive ratchet. Insert the ratchet extension into the square hole in the idler arm and use the ratchet to rotate the idler assembly enough to remove the belt. Remove the belt from the idlers and center cutterdeck pulley. Push belt back under engine deck.
3. Disconnect the electric clutch from the wire harness at plug **P**.
4. Remove the carriage bolts securing torque restraint **Q** to clutch **R**. Remove torque restraint.
5. Remove old belt from the machine.
6. Install a new belt by performing the these steps in reverse order.





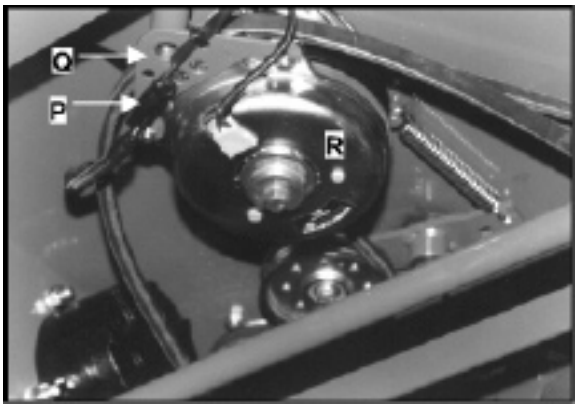
CUTTERDECK BELT

1. Set the cutterdeck in the lowest height-of-cut position.
2. Remove the engine-cutterdeck belt from the deck idlers and pulley (see engine-cutterdeck belt replacement). Push it aside but don't remove it from the machine.
3. Run the cutterdeck belt off the idler as shown. Remove it from the deck.
4. Install the new belt by performing these steps in reverse order. Take care to get the new belt on the correct side of the belt guides.
5. Re-install engine-cutterdeck belt (see engine-cutterdeck belt replacement).



PUMP-DRIVE BELT

1. Remove engine-cutterdeck belt (see engine-cutterdeck belt replacement).
2. Attach an extension to a 3/8" drive ratchet. Insert the ratchet extension in the square hole of the pump drive idler arm. Use the ratchet handle to rotate it enough to remove the pump drive belt.
3. Install a new pump drive belt in the same manner as it was removed.
4. Re-install engine-cutterdeck belt (see engine-cutterdeck belt replacement).



POWER UNITS

ENGINES:

Construction: Aluminum block with cast-in cast iron sleeves. Aluminum head.

Configuration: 4-stroke, vertical shaft, V-twin cylinder, overhead valve, air-cooled or liquid cooled.

DRIVE SYSTEM:

Full hydrostatic pump and wheel motor combination for independently controlled drive wheels.

Pump: Parker 12cc variable displacement piston pump.

Motors: Parker displacement MB series. Direct drive 1-1/4" (31.8mm) diameter output shaft.

Turn Radius: True Zero

OPERATOR PRESENCE INTERLOCK SYSTEM:

Start: The PTO (blades) must be off, traction levers in neutral lock, and parking brake on for engine to crank.

Run: Operator must be in seat to take parking brake off, to move traction levers out of the neutral lock position, or to turn the PTO (blades) on or the engine will kill. The parking brake must be off for the traction levers to move out of the neutral lock position.

The operator may leave the seat with the engine running if the parking brake is on, the PTO (blades) is off, and the traction levers are in the neutral lock position. A time delay eliminates annoying engine cutout from operation over rough terrain.

WEIGHT:

1025 lbs (465 kg)

CONTROLS:

Throttle; choke; power takeoff (PTO) clutch switch; traction levers; parking brake lever; lift lever.

FUEL SYSTEM:

One tank on each side of operator, each with a shut-off (1/4 turn). Total capacity 9-1/2 gallons (40 liters). Fuel selector/shutoff switch on front panel (1/4 turn). Replaceable fuel filter.

MAXIMUM GROUND SPEEDS:

Forward: 8.5 mph (13.7 km/h)

Reverse: 4 mph (6.4 km/h)

WHEELS & TIRES:

Drive wheels:

942220E:	23 X 8.50-12 4-Ply Turf Tread Tires
942244E, 942221E, 942248E:	23 X 10.5-12 4-Ply Turf Tread Tires
942233E, 942237E: 942249E	24 X 12.00-12 4-Ply Turf Tread Tires

Casters: 13 X 5.00-6 4-Ply Smooth Tread Tires (USED ON 52" DECKS)
13 X 6.5-6 4-Ply Smooth Tread Tires (USED ON 61" DECKS)

Pressure: 14 p.s.i. (1 kg/cm^2)

BRAKING:

Parker brakes. Spring applied for overload protection.

SEAT:

High back, foam padded full suspension seat with standard armrests. Fore and aft adjusters, hinged for easy tilt-up access to pumps and battery. Internally mounted seat switch.

ENGINES					
MODEL NUMBERS	**942220E, 942221E**	**942233E, 942244E**	**942237E**	**942248E**	**942249E**
MANUFACTURER	Kawasaki	Kawasaki	Kohler	Kawasaki	Kawasaki
MODEL	FHV19	FHV25	CV740	FHV21	FX751
CYLINDERS	2	2	2	2	2
COOLING	Air	Air	Air	Air	Air
BORE/STROKE	2.96 X 2.99" (75.2 X 76 mm)	2.96 X 2.99" (75.2 X 76 mm)	3.27 X 2.64" (83 X 67mm)	2.96 X 2.99" (75.2 X 76 mm)	3.33 X 2.99" (184.5 76mm)
DISPLACEMENT	41.2 cu.in. (675 cc)	41.2 cu.in. (675 cc)	44 cu. in. (725cc)	41.2 cu. in. (675cc)	52.0 cu. in. (852cc)
COMPRESSION	8.5:1	8.1:1	9:1	8.5:1	8.2:1
OUTPUT POWER	19 hp (14.2 kw) @ 3600 rpm	25 hp (18.6 kw) @ 3600 rpm	27hp (20.1kw) @ 3600 rpm	21hp (15.6.1kw) @ 3600 rpm	27hp (20.1 kw) @ 3600 rpm
OUTPUT TORQUE	37.0 ft-lb (50.2 J) @ 2500 rpm	41.3 ft-lb (56.0 J) @ 2400 rpm	42.7 ft-lb (57.9 J) @3000 rpm		
LUBRICATION	FULL PRESSURE	FULL PRESSURE	FULL PRESSURE	FULL PRESSURE	FULL PRESSURE
GOVERNOR	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical
AIR CLEANER	Dual element	Heavy duty cyclonic	Heavy duty cyclonic	Dual element	Dual element
IGNITION SYSTEM	Electronic	Electronic	Electronic	Electronic	Electronic
CHARGING SYSTEM	15 amp, regulated	15 amp, regulated	15 amp, regulated	15 amp, regulated	15 amp, regulated
BATTERY	BCI group U1	BCI group U1	BCI group U1	BCI group U1	BCI group U1
FUSES	Two, 20 amp blade	Two, 20 amp blade	Two, 20 amp blade	Two, 20 amp blade	Two, 20 amp blade
FUEL CONSUMPTION @ MAX LOAD/ SPEED	1.7 gal./hr (6.5 l/hr)	2.3 gal./hr (8.8 l/hr)	2.2 gal./hr (8.3 l/hr)		

GENERAL	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS	DATE	HRS
Check Tire Pressures												
Lubricate All Points												
Check Nuts & Bolts												
ENGINE												
Check Engine Coolant Level (Where Applicable)												
Check Oil Level												
Change Oil												
Clean Air Cleaner Element												
Clean Cooling Fins												
Replace Air Cleaner Element												
Clean & Gap Spark Plugs												
NOTE: After first 5 hours of operation replace engine oil, hydraulic oil and both filters.												

CUTTERDECKS			
MODEL NUMBER	**942220E**	**942221E, 942244E, 942248E**	**942233E, 942237E 942249E**
TYPE	Side Discharge	Side Discharge	Side Discharge
CUTTING WIDTH	47.25" (120 cm)	52.5" (133 cm)	61" (155 cm)
WIDTH	N/A	N/A	N/A
WIDTH (CHUTE UP)	54" (137 cm)	56.25" (143 cm)	62" (157 cm)
WIDTH (CHUTE DOWN)	59" (150 cm)	64.5" (164 cm)	73" (185 cm)
BLADE	high lift (low lift optional)	high lift (low lift optional)	high lift (low lift optional)
NUMBER OF BLADES	3	3	3
BLADE LENGTH	16.25" (41 cm)	18" (46 cm)	21" (53 cm)
BLADE THICKNESS	.205" (5.2 mm)	.205" (5.2 mm)	0.25" (6.35 mm)
TIP SPEED	16778 ft/min 5114 m/min @3600 Engine RPM	18585 ft/min 5665 m/min @ 3600 Engine RPM	18850 ft/min 5745 m/min @ 3500 Engine RPM
DAILY PRODUCTION (8 hr @ 6 mph)	Up to 22.9 acres (9.3 ha)	Up to 25.5 acres (10.3 ha)	Up to 29.5 acres (11.9 ha)

CONSTRUCTION:
Fabricated and welded 10-gauge, double-layer steel top with 7-gauge side skirts. Full floating design.

CUTTERDECK DRIVE SYSTEM:
Electric clutch/brake drives belt directly from engine to center spindle of cutterdeck. No twists in drive belt.

SPINDLES:
Top mounted and maintenance free, with 1” shaft in precision machined, aluminum housing

SPECIFIC TORQUES
BLADE BOLT TORQUE: 70 FT-LBS (95 Nm)
WHEEL HUB NUTS: 225 FT-LBS (237 Nm)
ENGINE CRANKSHAFT BOLT: 50 FT-LBS (68 Nm)

ANTI-SCALP ROLLERS:
48” Cutterdecks - 3 Rollers
52” Cutterdecks - 6 Rollers
61” Cutterdecks - 7 Rollers

CUTTING HEIGHT & PRODUCTION:
Height: Spring assisted lift lever allows easy setting of cut heights from 1-1/2” to 4-1/2” in 1/4” increments. “Set and forget” feature allows height of cut to be set and returned to without searching from operator position.

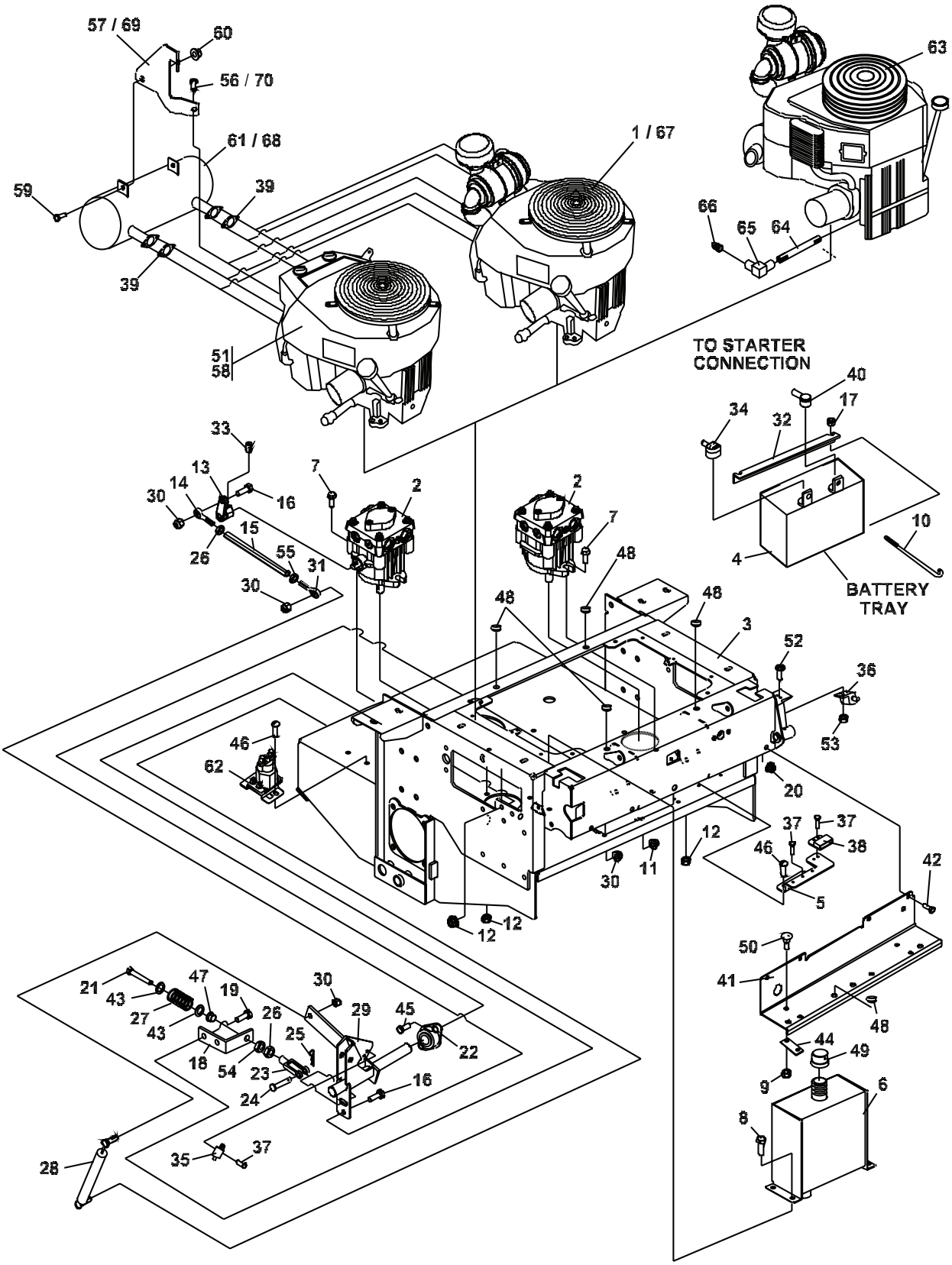
NOTE: 48” cutterdecks do not use spring assisted lift levers.

PARTS SECTION

UPPER ENGINE DECK ASSY

ZT 200 Series

FIGURE 1



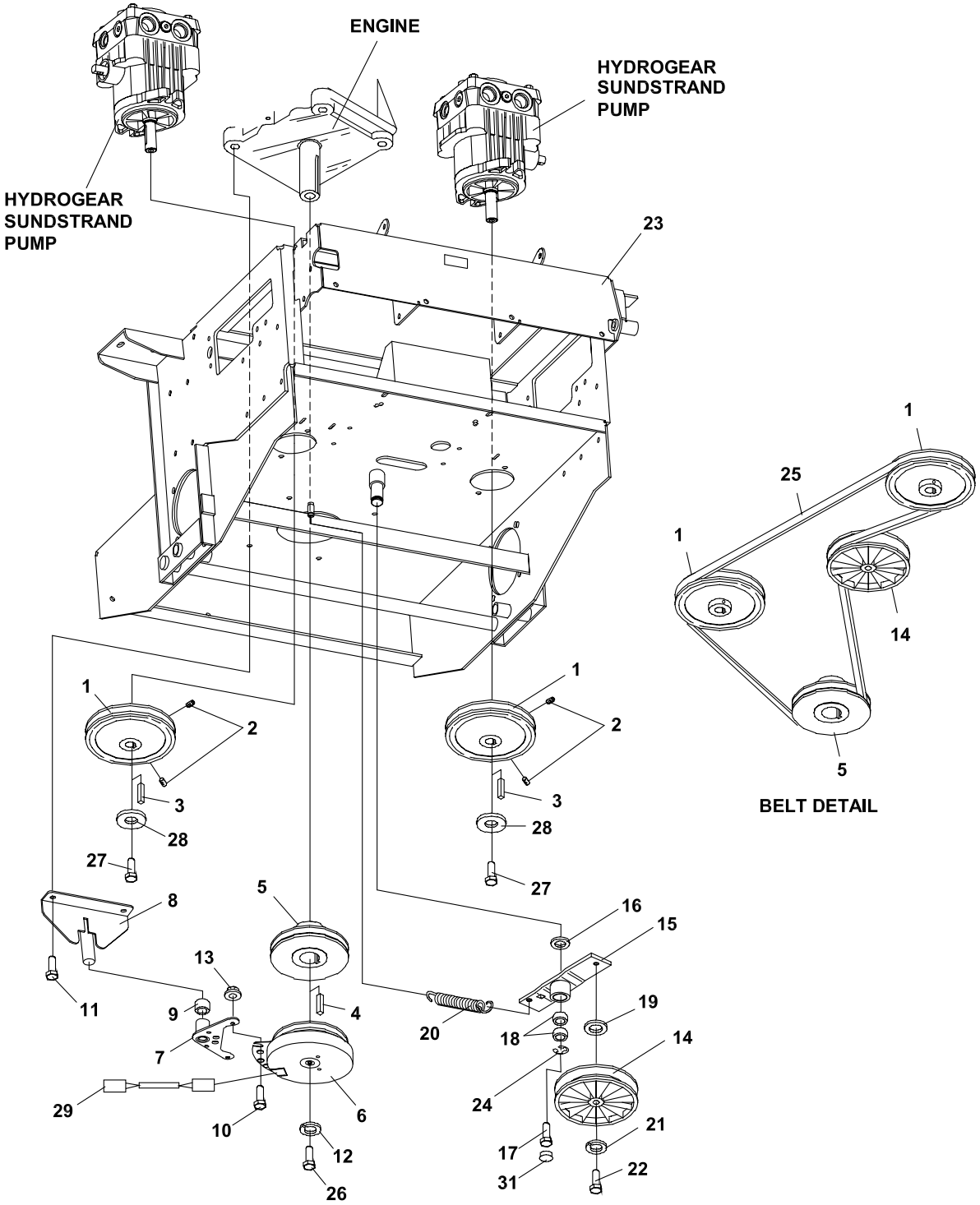
UPPER ENGINE DECK ASSY

FIGURE 1

ITEM	PART NO.	DESCRIPTION	QTY
1	4118340	ENG-KAW FHV 25 HDAC	1
	4114746	S-AIR FILTER PRIMARY	1
	4114747	S-AIR FILTER SAFETY	1
	2722214	FILTER-OIL	1
	38666	FILTER-FUEL	1
2	4137278	PUMP-HYDROSTATIC 12CC	2
	(SEE FIGURE 8 FOR BREAKDOWN)		
3	4136780	S-ENGINE DECK W/LABS	1
4		BATTERY	1
	(OBTAIN LOCALLY)		
5	4138859.7	BRACKET-RELAY MNTG	1
6	2186211	S HYD RESERVOIR W/LABS	1
7	64263-013	BLT-FLG HD M10-1.5 X 30	4
8	64197-016	BLT-TDFM 3/8-16X1/2	4
9	64268-03	LOCKNUT-3/8-16	4
10	831861	BOLT,BENT BATT HOOK	2
11	64141-4	NUT-WLF 3/8-16	8
12	64237-03	LOCKNUT-NYLON M10-1.5	8
13	4118430	ARM-PUMP	2
14	38369-02	ROD END BALL JOINT LH	2
15	2188140	TURNBUCKLE	2
16	64205-003	BLT-MET M8-1.25X30	4
17	64229-02	LOCKNUT-NYLON 5/16-18	2
18	2182405.7	BRKT-REVERSE RETURN	2
19	A1104057	BOLT-M10-1.50X25	4
20	64246-03	NUT-WHIZ M10-1.50	4
21	64123-205	BLT-HEX 5/16-24X4	2
22	2188145	BEARING-.75IDSELF-ALIGN	4
23	38020N	CLEVIS YOKE, 5/16 PLATE	2
24	64188-02	PIN, CLEVIS 5/16X1	2
25	64168-2	COTTER-HAIRPIN.08X1.19	2
26	64025-03	NUT-HEX 5/16-24	4
27	2188139	SPRING-COMPRESSION	2
28	2721246	DAMPENER	2
29	4112105.7	WLDMT-MOTION CTRL RH	1
	*4112104.7	WLDMT-MOTION CTRL LH	1
30	64237-05	LOCKNUT-NYLON M8-1.25	8
31	38369-01	ROD END BALL JOINT RH	2
32	2182427.7	HOLDDOWN-BATTERY	1
33	64192-06	SETSCR SQHD 5/16-18X3/4	2
34	112386	BOOT,BAT TERM POS	1
35	108208	SWITCH DBL POLE	2
36	2188156	SWITCH-NONO DBL POLE	1
37	64197-015	BLT-TDFM 10-32X1/2 TORX	8
38	2188154	MODULE-DELAY	1
39	11060-9016	GASKET-MUFFLER	2
	(AVAILABLE THROUGH KAWASAKI DEALER)		
40	2308095	COVER-TERMINAL	1
41	4158086.7	PLATE-KICK	1
42	64263-011	BLT-FLG HD M10-1.5 X 20	4
43	64163-55	WASHER .328X.75X14 GA	4
44	2188146	STRIP, WEAR	2
45	64123-15	BOLT-3/8-16X3/4 HEX	8
46	64152-23	1/4-20X3/8 LG SP SCREW	4
47	38304-02	BRG, FLGD PLASTIC	2
48	810149	BUMPER-RUBBER	8
49	69216.7	CAP-RESERVOIR	1
50	64018-23	BLT-CRG 3/8-16X3/4	4
51	4159840	ENGINE-21HP KAW	1
52	64152-46	SCREW-SLT HH 10-24X1/2	2
53	64025-15	NUT-HEX #10-24 KEPS	2
54	64229-08	LOCKNUT NYLON 5/16-24	2
55	64025-33	NUT-HEX 5/16-24 LH	2
56	64263-002	BLT-FLG HD M6-1.0 X 16	4
57	4118507.7	BRKT-MUFFLER LH	1
	*4118508.7	BRKT-MUFFLER RH	1
58	2720607	ENGINE-KAWASAKI FHV 19	1
	4114746	S-AIR FILTER PRIMARY	1
	4114747	S-AIR FILTER SAFETY	1
	2722214	FILTER-OIL	1
	38666	FILTER-FUEL	1
	(ITEMS 39, 46, 56 & 59-62 FOR USE WITH KAWASAKI ENGINES ONLY)		
59	64263-007	BLT-FLG HD M8-1.25 X 20	2
60	64266-02	NUT-FL LOCK M8-1.25	2
61	2188226	ASSY-MUFFLER	1
62	38665	SOLENOID	1
63	4123374	ENGINE-KOHLER CV740S	1
	(SERVICE MANUAL KOHLER #TP-2475-A)		
	4114746	S-AIR FILTER PRIMARY	1
	4114747	S-AIR FILTER SAFETY	1
	842502	FILTER-OIL	1
	38666	FILTER-FUEL	1
64	48024-17A	NIPPLE-PIPE 3/8 X 5	1
65	2690033-01	ELBOW 3/8 PIPE, 90 DEG	1
66	690501	PLUG-PIPE 3/8	1
67	4163086	ENGINE, KAW FX751	1
	*4152953	S-AIR FILTER PRIMARY	
	*4152954	s-AIR FILTER SAFETY	
68	4163089	ASSY-MUFFLER	1
69	4163124.7	BRACKET MUFFLER RH	1
	*4163123.7	BRACKET MUFFLER LH	1
70	64263-001	BLT-FLG HD M8-1.25 X 20	4
	(ITEMS 67 - 70 USED ON 942249E ONLY)		

*** NOT ILLUSTRATED**

FIGURE 2


ENGINE
HYDROGEAR
SUNDSTRAND
PUMP
HYDROGEAR
SUNDSTRAND
PUMP
23
1
2
3
28
27
8
5
16
15
13
11
9
4
20
19
18
14
7
24
29
6
10
12
17
21
31
22
26
1
25
1
14
5
BELT DETAIL
TORQUE TO 50 FT/LBS +/-10%

LOWER ENGINE DECK ASSY/CLUTCH

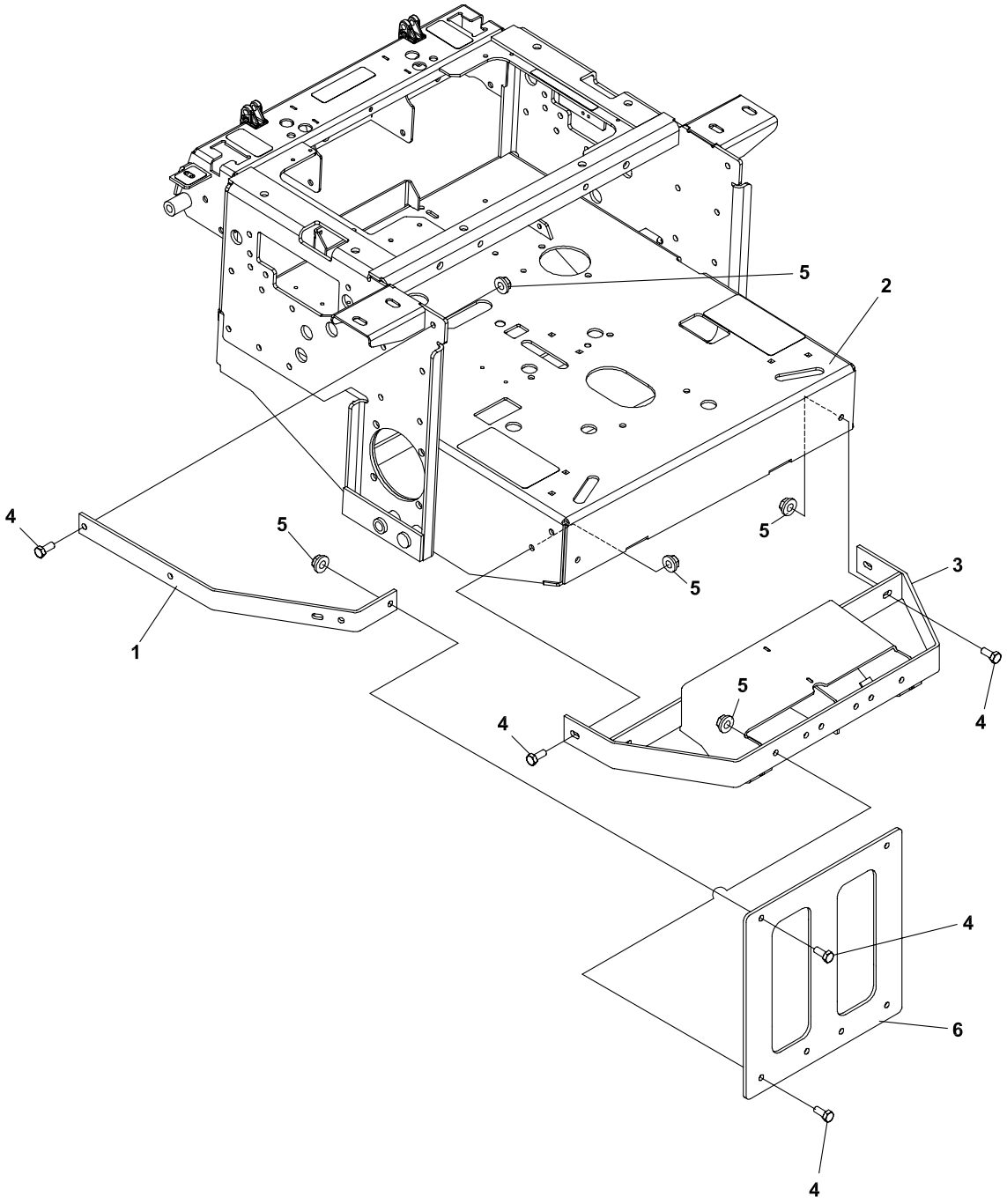
FIGURE 2

ITEM		PART NO.	DESCRIPTION	QTY
1		4158360	PULLEY-PUMP	2
2		64044-18	SCREW-SET 1/4-20 X 5/16	4
3		64238-03	KEY-MET 5MM SQX28MM	2
4		64164-12	KEY	1
5		4157860	PULLEY-5.25 ENGINE	1
6		2721337	CLUTCH-ELECTRIC	1
		(USED ON ALL MODELS EXCEPT 19HP)		
		(INCLUDES ITEMS 29 & 30)		
		2722016	CLUTCH-ELECTRIC 19HP	1
		(USED ON 19HP MODELS ONLY)		
		(INCLUDES ITEMS 29 & 30)		
7		2721338.7	WLDMT-CLUTCH STOP	1
		(USED ON ALL MODELS EXCEPT 19HP)		
		2721331.7	WLDMT-CLUTCH STOP	1
		(USED ON 19HP MODELS ONLY)		
8		2186147.7	WLDMT-CLUTCH BRACKET	1
9		38304-03	BEARING-FLANGED PLSTC	1
10		64205-001	BLT-MET M8-1.25X20	2
11		64197-005	BLT-TDFM 3/8-16X1-1/4	4
12		64006-06	LCKWSHER-HELICAL 7/16	1
13		64265-04	NUT-FL NYL LOCK M8-1.25	2
14		2308000	PULLEY-IDLER 4.00 EOD	1
15		4128923	S-ASSY-IDLER ARM PUMP	1
		(INCLUDES ITEMS 16, 18 & 24)		
16		4127999	SEAL	1
17		64270-01	BOLT-MET HEX M10-1.5X30	1
18		4128004	BEARING	1
19		33148-01	SPACER-0.379X0.750X0.25	1
20		2188131	SPRING-EXTENSION	1
21		64006-03	WSHR, 3/8 HELICAL LOCK	1
22		64123-21	BLT-HEX 3/8-24X1-1/4	1
23		4136780	S-ENGINE DECK W/LABS	1
24		64144-40	SNAP RING	1
25		4162583	BELT-TRACTION DRIVE	1
26		64123-155	BLT-HEX 7/16-20X3	1
27		64205-013	BLT-MET M6-1X12	2
28		64209-09	WASHER-CONICAL SPRING	2
29		2720949	ASSY-CLUTCH WIRE	1
30	*	4121560	KIT-BRAKE POLE RPLCMNT	1
31		4128002	END CAP	1

*** NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 3



BUMPER

FIGURE 3

ITEM	PART NO.	DESCRIPTION	QTY
3-1	2722296.7	ARM-BUMPER	2
3-2	4136780	S ENG DECK W/LABS	1
3-3	2721324.7	WLDMT-BUMPER	1
3-4	64263-013	BLT-FLG HD M10-1.5 X 30	10
3-5	64265-05	NUT-FL NYL LOCK M10-1.5	10
3-6	2721932.7	BRACE-VERTICAL	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 4

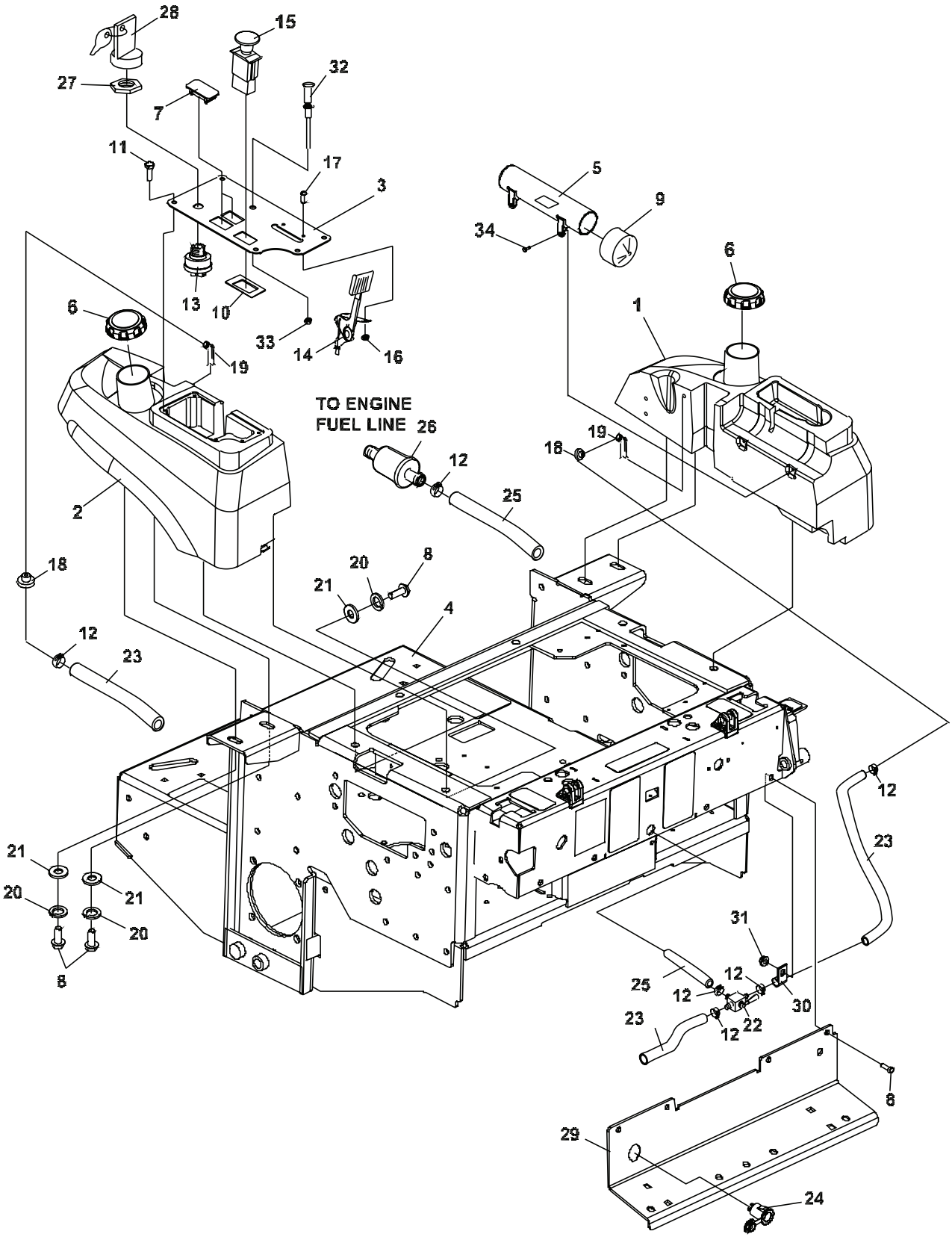

28
15
32
27
7
11
17
3
5
9
34
6
1
13
10
33
14
16
19
6
TO ENGINE
FUEL LINE
26
12
25
18
19
2
20
8
21
4
18
12
23
12
23
21
20
21
20
8
31
25
12
12
30
23
12
22
8
29
24

FIGURE 4

ITEM	PART NO.	DESCRIPTION	QTY
1	4162990	TANK-FUEL LH (INCLUDES ITEMS 18 & 19)	1
2	4162991	TANK-FUEL RH (INCLUDES ITEMS 18 & 19)	1
3	4159162	S-CONTROL PANEL	1
4	4136780	S ENG DECK W/LABS	1
5	4160281	S DOC TUBE W/LABEL	1
6	4130320	CAP-FUEL GASOLINE 3.5	2
7	4110023	PLUG-SWITCH HOLE	2
8	64205-007	BLT MET M10-1.50X20	12
9	38061A	VINYL CAP	1
10	2188178	SWITCH-RETAINER	1
11	64263-001	BLT-FLG HD M6-1.0 X 12	5
12	88042N	HOSE CLAMP	6
13	128010	KEY-SWITCH	1
14	118020-16	CONTROL-THROTTLE 48	1
15	2721505	SWITCH-PTO	1
16	64025-15	NUT-HEX #10-24 KEPS	2
17	64152-46	SCR.-SLT HH #10-24X1/2	2
18	4132325	GROMMET-FUEL TANK	2
19	4162997-001	TUBE-FUEL LINE	2
20	800488	LOCKWASHER M10	8
21	64251-004	WASHER-M10	8
22	2188161	VALVE-TANK SELECTOR	1
23	4162977-016	HOSE,.25IDX.50OD X 48"	1
24	4142266	CONNECTOR, 12V RECEPT	1
25	4162977-009	HOSE-.25IDX.50OD X 24"	1
26	38666	FILTER, FUEL B&S	1
27	128010-01	S-KEY SWITCH NYLON NUT	1
28	128010-03	S-COVERED KEY	1
29	4158086.7	PLATE-KICK	1
30	48228-2A	CLAMP	1
31	64246-03	NUT-WHIZ M10-1.50	4
32	108009-05	CONTROL-CHOKE 55"	1
33	64025-04	NUT-3/8-24 HEX	1
34	64263-002	BLT-FLG HD M6-1.0 X 16	2

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 5

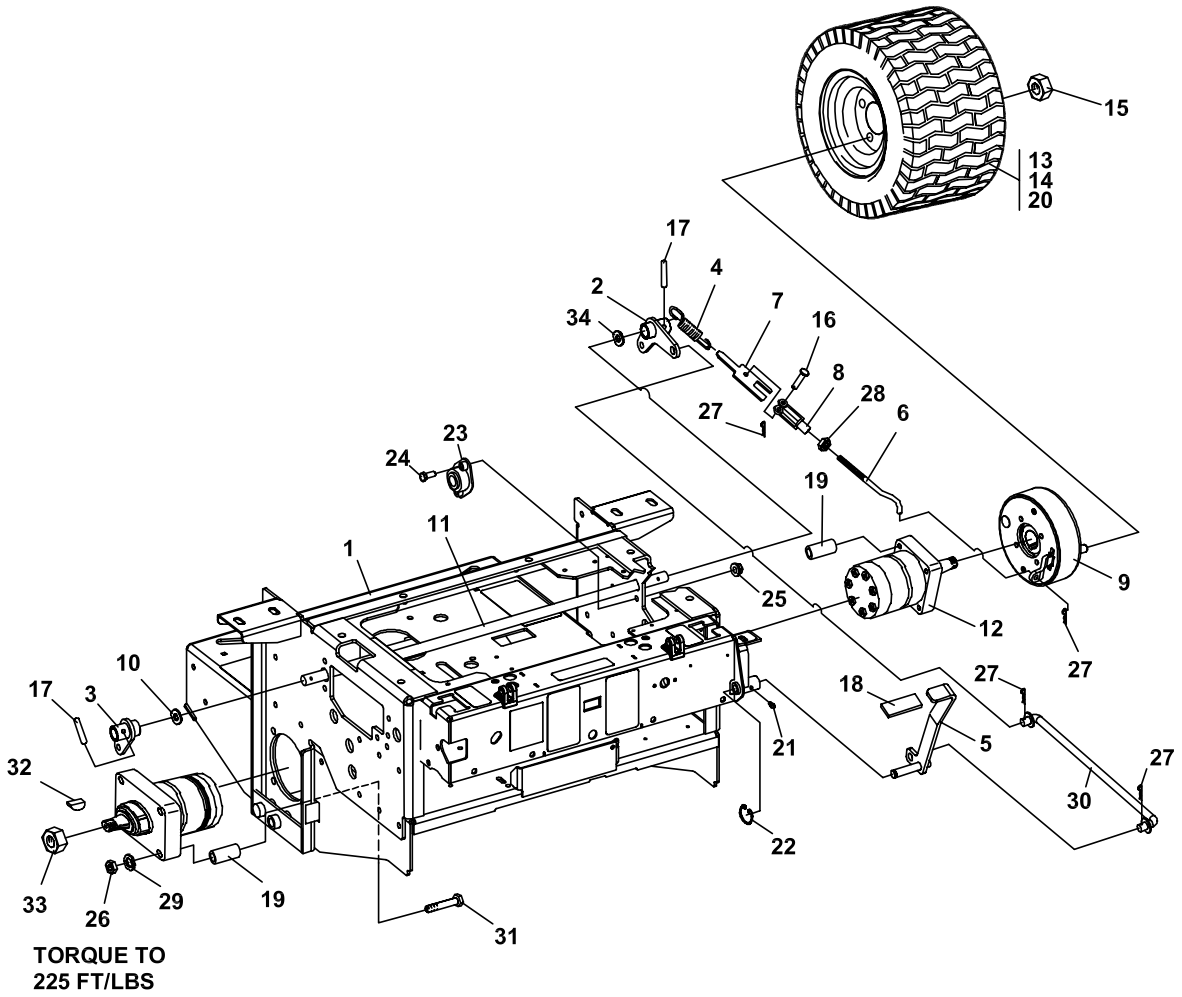

15
13
14
20
17
4
2
34
7
16
8
28
27
6
23
24
19
11
1
25
9
12
27
27
10
17
3
18
27
5
21
32
27
30
22
33
26
29
19
31
TORQUE TO
225 FT/LBS

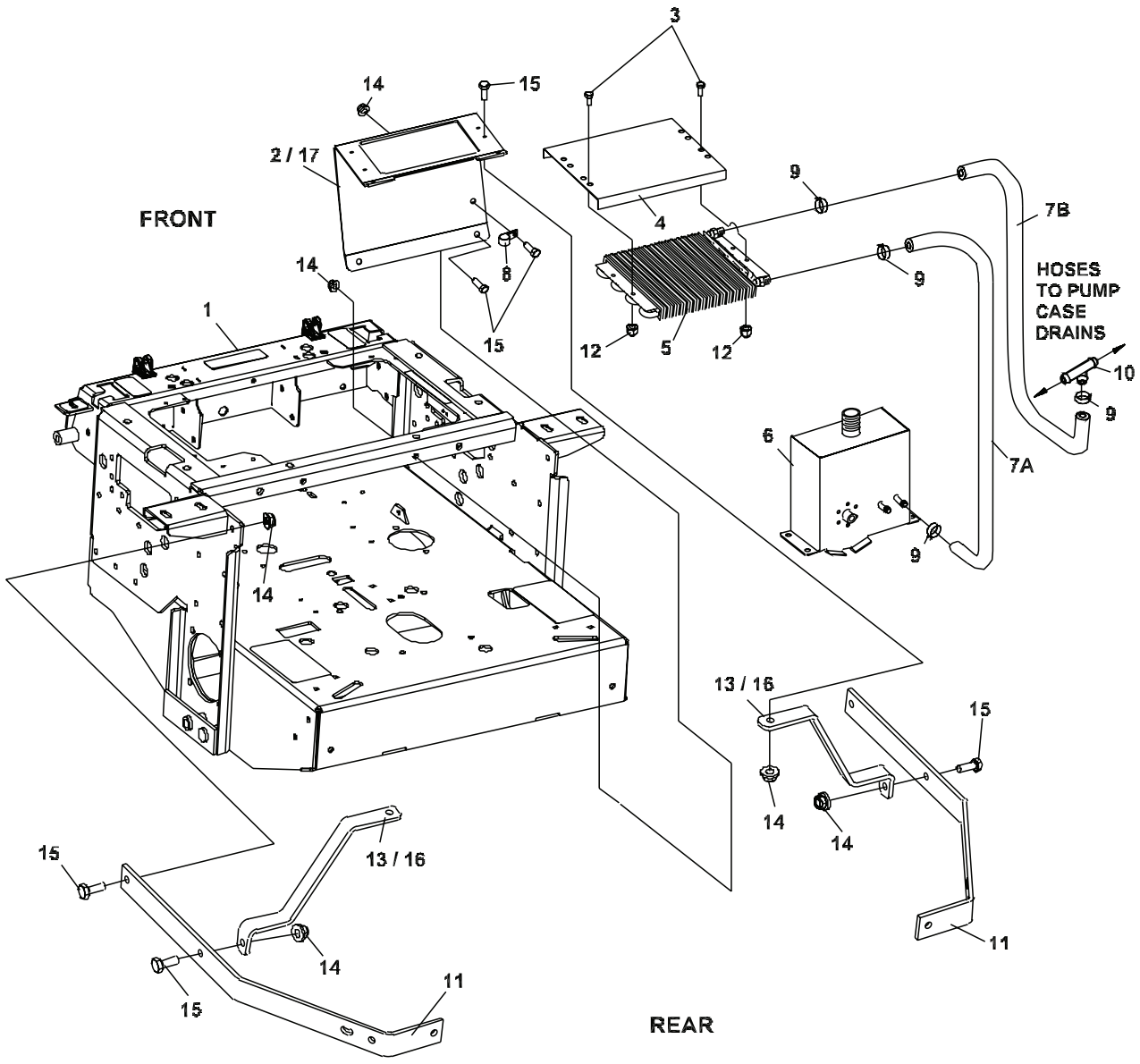
FIGURE 5

ITEM	PART NO.	DESCRIPTION	QTY
1	4136780	S-ENGINE DECK W/LABS	1
2	4158803.7	WLDMT-BRAKE ARM LH	1
3	4158801.7	WLDMT-BRAKE ARM RH	1
4	128102	SPRING,EXTENSION	2
5	4159241.7	WLDMT-BRAKE LEVER	1
6	4159701	ROD-BRAKE CONTROL	2
7	2182387.7	GUIDE-SPRING	2
8	38020N	CLEVIS YOKE, 5/16 PLATE	2
9	4159281	BRAKE-PARKER	2
9A*	4159281-001	Brake-Back Plate w/ Pads	1
9B*	4159281-002	Brake-Drum	1
9C*	4159281-003	Brake-Screw	4
9D*	4159281-004	Brake-Hub	1
10	64163-06	WSHR,.768/.756X1.25X14	A/R
11	4159000	BAR-PARKING BRAKE	1
12	4159280	MOTOR-PARKER	2
	(INCLUDES ITEMS 32 & 33)		
13	4158422	ASSY-WHEEL 24 X 12-12	2
	1985085-02	TIRE 24X12.00-12NHS 4PLY	2
	(ITEM 34 USED ON 942233E, 942237E & 942249E)		
14	4158460	ASSY-WHEEL 23 X 8.5-12	2
	(ITEM 14 USED ON 942220E)		
15	64187-03	WHEEL NUT-1/2-20	8
16	64188-02	PIN, CLEVIS 5/16X1	2
17	64061-25	ROLL PIN-1/4X1-1/4	2
18	2188155	GRIP, 1/4X1X4-1/2	1
19	2183063-01	SPACER, 32MM LONG	8
20	4158421	ASSY-WHEEL 23 X 10.5-12	2
	(ITEM 34 USED ON 942221E, 44E & 48E)		
21	85010N	ZERK, 1/4-28 STR SLFTHRD	1
22	64144-34	SNAP RING.50	1
23	2188145	BEARING-.75ID SELF ALIGN	2
24	64123-15	BOLT-3/8-16X3/4 HEX	4
25	64141-4	NUT-WLF 3/8-16	4
26	64207-07	NUT-HEX M12-1.75	8
27	64168-2	COTTER-HAIRPIN.08X1.19	4
28	64025-03	NUT-HEX 5/16-24	2
29	64006-05	LOCKWSHR-HELICAL 1/2	8
30	4159242	WLDMT-PRK BRAKE ROD	1
31	450767	CAPSCREW 12-1.75X110	8
32	64164-08	S-KEY FOR WHEEL MOTOR	2
33	64025-31	NUT 1-20 UNSLOTTED TRW	2
34	99-B34	WASHER	1

*NOT ILLUSTRATED

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 6


3
14
15
2 / 17
FRONT
4
9
7B
14
8
9
HOSES
TO PUMP
CASE
DRAINS
1
15
12
5
12
10
9
6
7A
14
9
13 / 16
15
14
14
15
13 / 16
14
11
15
11
REAR

OIL COOLER

FIGURE 6

ITEM	PART NO.	DESCRIPTION	QTY
1	4136780	S ENGINE DECK W/LABS	1
2	4139443.7	BRKT-COOLER FRONT	1
3	64263-002	BLT-FLG HD M6-1.0 X 16	4
4	2720891.7	SCREEN-OIL COOLER	1
5	2188173	COOLER-OIL	1
6	2186211	S HYD RSRVR W/LABS	1
	(69053-05 IS A SERVICEABLE LENGTH OF 55")		
7A	69053-05	3/8 HIGH TEMP HOSE 26"	1
7B	69053-05	3/8 HIGH TEMP HOSE 22"	1
8	48228-2A	CABLE-CLIP 3/4 W/INSTN	2
9	88042-04	CLAMP-3/4 CLIP	4
10	58026-01	3 WAY CONNECTOR 3/8	1
11	2722296.7	ARM-BUMPER	2
12	64237-02	LOCKNUT-NYLON M6-1.00	4
13	4139367.7	BRACKET-REAR COOLER	2
14	64265-05	NUT-FL NYL LOCK M10-1.5	9
15	64263-013	BLT-FLG HD M10-1.5 X 30	9
16	4162890.7	BRACKET-REAR COOLER	2
17	4162889.7	BRACKET FRONT COOLER	1
	(ITEMS 16 & 17 USED ON 942249E ONLY)		

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 7

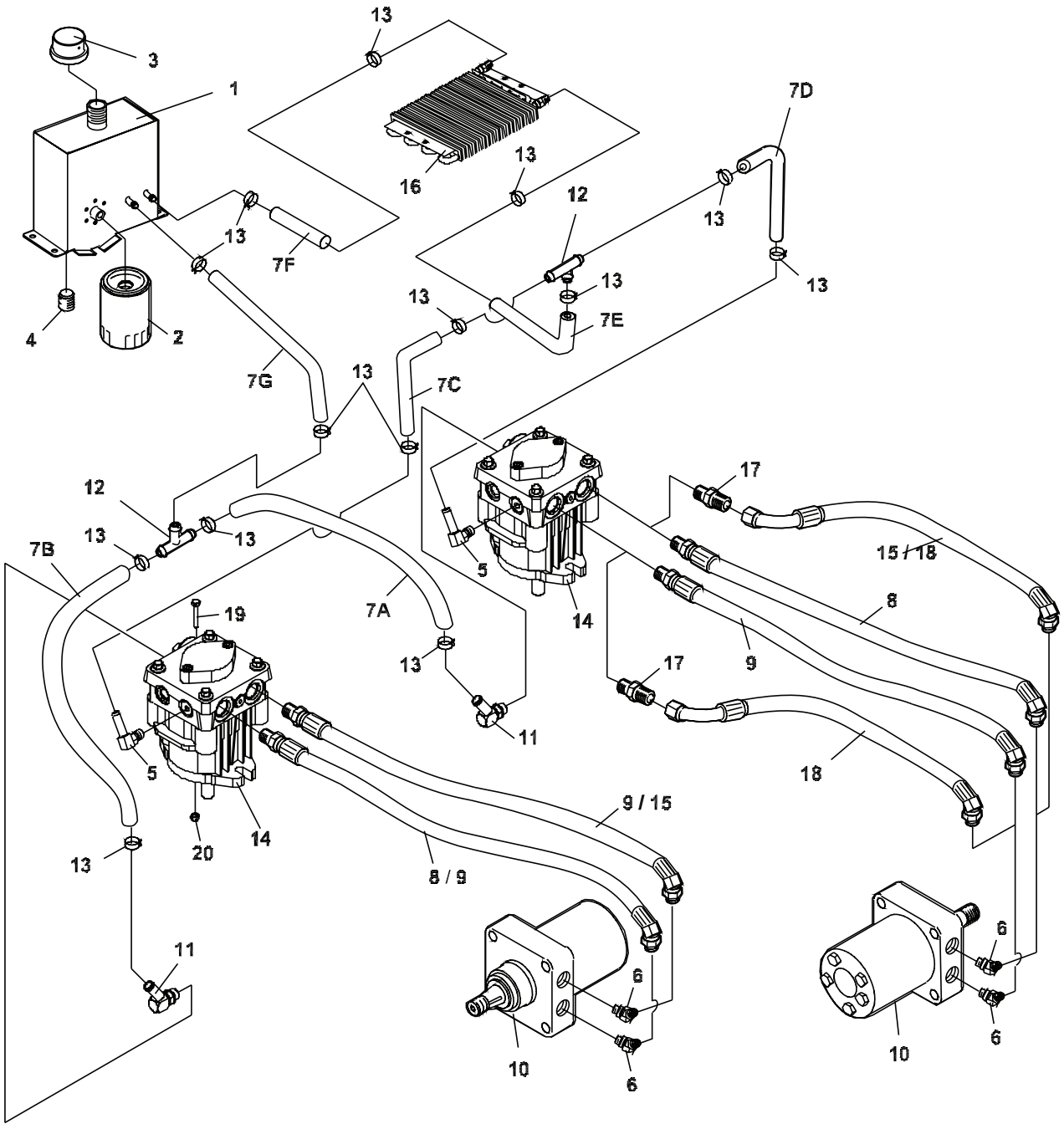

13
3
1
16
13
7D
12
13
13
7F
13
13
13
7E
4
2
13
7G
13
7C
12
13
13
7B
17
15 / 18
5
14
8
19
7A
9
17
13
11
5
18
9 / 15
20
14
13
8 / 9
11
6
6
10
6
6
10

FIGURE 7

ITEM	PART NO.	DESCRIPTION	QTY
1	2186211	S HYD RESERVOIR W/LAB	1
2	2720396	FILTER 25 MICRON	1
3	69216.7	CAP-RESERVOIR	1
4	4160243	PLUG-HYDRAULIC TANK	1
5	158058-04	FTG-90 BRB 9/16-18X.38	2
6	108205-03	ELBOW-MALE 45 37-ORB	4
	(69053-05 IS A SERVICEABLE LENGTH OF 55")		
7A	69053-05	3/8 HIGH TEMP HSE 18"	1
7B	69053-05	3/8 HIGH TEMP HSE 15"	1
7C	69053-05	3/8 HIGH TEMP HSE 19"	1
7D	69053-05	3/8 HIGH TEMP HSE 12"	1
7E	69053-05	3/8 HIGH TEMP HSE 22"	1
7F	69053-05	3/8 HIGH TEMP HSE 26"	1
7G	69053-05	3/8 HIGH TEMP HSE 5"	1
8	2188157-01	HOSE HYD ORB 37-22.38 (USE QTY 1 ON 19HP & 25HP KAW) (USE QTY 2 ON 27HP KLR)	2
9	2188157-02	HOSE HYD ORB 37-25.00 (USE QTY 1 ON 25HP & 27HP KAW) (USE QTY 2 ON 19HP KAW & 27HP KLR)	
10	4159280	MOTOR-PARKER	2
11	2690030-01	FTG 9/16-18 ORB X 3/8	2
12	58026-01	3 WAY CONNECTOR 3/8	2
13	88042-04	CLAMP-HOSE 5/8	14
14	4137278	PUMP-HYDRO 12cc	2
15	2720320-02	HOSE-1/2 37/45 37 (USE ON LH SIDE OF 27HP KAW ONLY)	1
16	2188173	OIL COOLER	1
17	48089-03	FTG-STRGHT 8 ORB X 8 JIC (USE QTY 1 ON 19HP KAW) (USE QTY 2 ON 25HP KAW)	
18	2720320-01	HOSE-1/2 37/45 37 26.25 (USED ON 19HP , 25HP & 27HP KAW ONLY) (USE QTY 2ON 27HP KAW)	1
19	64123-60	BOLT, 1/4-20X2 HEX	2
20	64229-01	LOCKNUT-NYL 1/4-20	2

SAE PORT 'O' RING		
PART NUMBER	THREAD SIZE	AS-568#
158061-10	9/16-18	-906
158061-11	3/4-16	-908
158061-12	7/8-14	-910
158061-13	1-1/16-12	-912
158061-14	1-5/16-12	-916
158061-16	1-5/8-12	-920
158061-03	1-7/8-12	-924

FIGURE 8

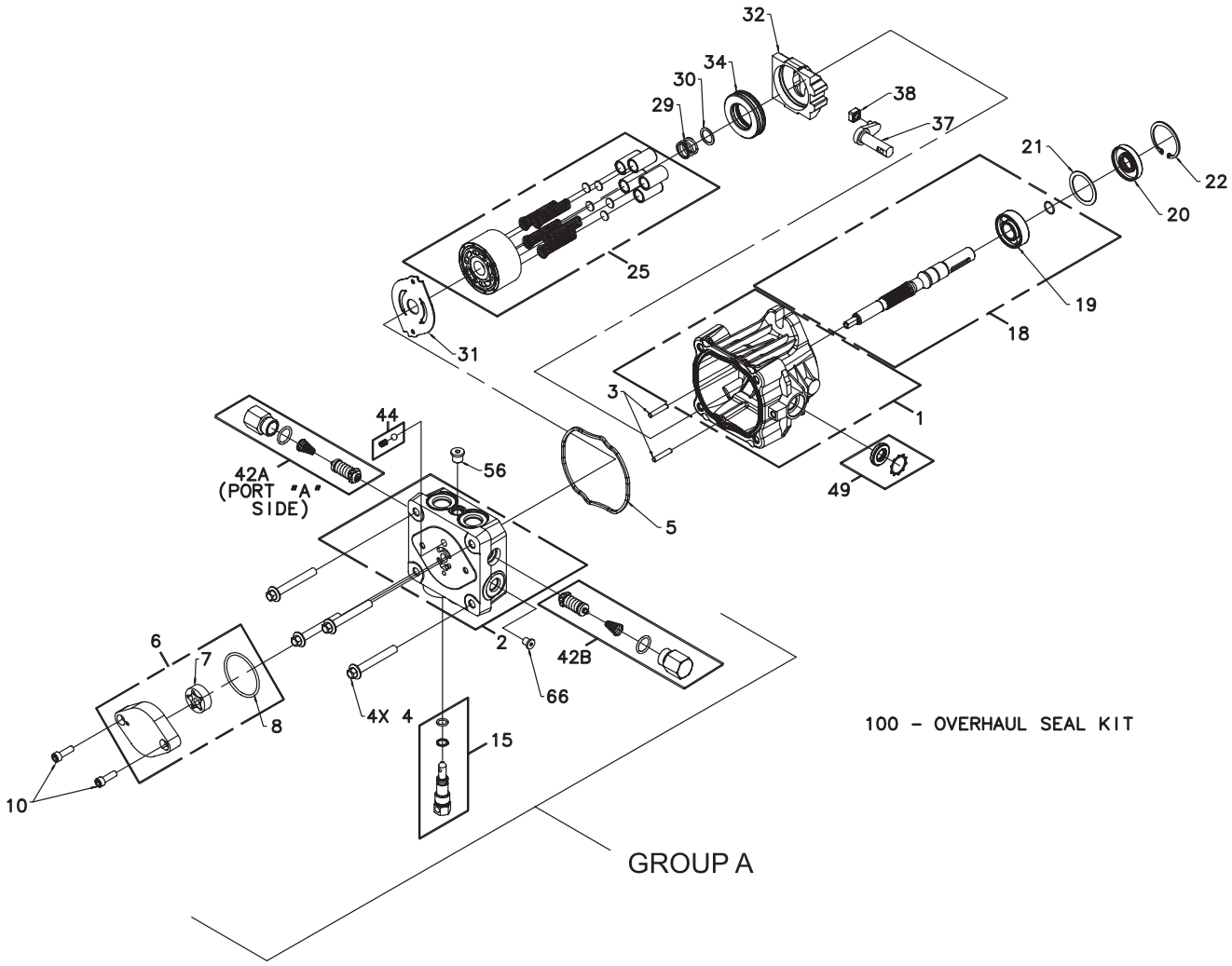
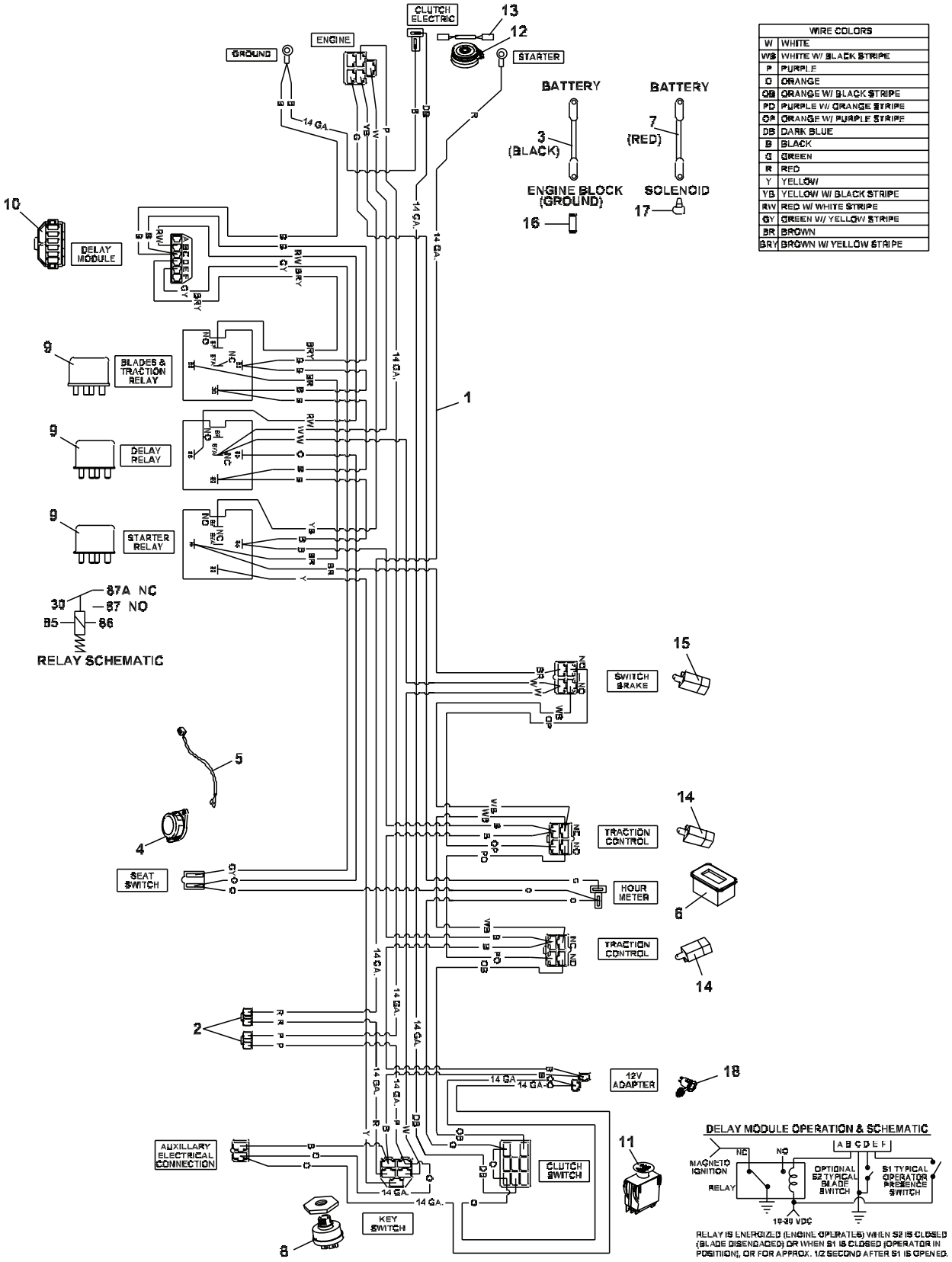

32
34
30
29
38
37
21
22
20
25
19
18
31
3
1
44
42A
(PORT "A"
SIDE)
56
5
49
6
7
8
2
42B
66
4X 4
15
10
100 - OVERHAUL SEAL KIT
GROUP A

FIGURE 8

ITEM	HYDROGEAR PART NO.	CGC, INC. PART NO.	DESCRIPTION	QTY
1	70516	-----	HOUSING KIT	1
2	70517	-----	END CAP KIT	1
3	50641	-----	STRAIGHT HEADLESS PIN	2
4	50969	2721615-01	FLANGE BOLT M8-1.25 X 60	4
5	51232	2721615-02	HOUSING O-RING	1
6	2513027	38345-06	CHARGE PUMP KIT	1
7	50273	38345-07	STD GEROTOR ASSEMBLY	1
8	9004101-1340	38345-08	O-RING	1
10	50095	38345-10	SOCKET SCREW M6-1.0 x 20	2
15	2513030	-----	BYPASS VALVE KIT (BLANK)	1
18	70521	2721615-07	PUMP SHAFT KIT	1
19	50315	-----	BALL BEARING 17 X 40 X 12	1
20	51161	-----	LIP SEAL 17 x 40 x 12	1
21	50951	-----	SPACER	1
22	50329	-----	RETAINING RING	1
25	70331	38345-12	CYLINDER BLOCK KIT	1
29	2003014	-----	BLOCK SPRING	1
30	2003017	-----	BLOCK THRUST WASHER	1
31	51246	2721615-09	VALVE PLATE	1
32	2003087	188059-11	SWASH PLATE	1
34	50551	2721615-11	BALL THRUST BEARING	1
37	2003005	188059-15	ARM-TRUNION	1
38	2000015	2721615-13	SLOT GUIDE	1
42A	70743	4121354	SHOCK VALVE KIT (.031")	1
42B	70741	4121355	SHOCK VALVE KIT (BLANK)	1
44	70403	2721615-16	CHARGE RELIEF VALVE KIT	1
49	2513043	2721615-17	TRUNNION SEAL/RETAIN KIT	1
56	9005110-4400	-----	STRAIGHT THREAD PLUG	1
66	9005110-3100	-----	5/16 SAE PLUG	1
100	70525	2721615-18	OVERHAUL SEAL KIT	1

FIGURE 9


CLUTCH ELECTRIC
13
12
STARTER
ENGINE
GROUND
14 GA.
BATTERY
3
(BLACK)
ENGINE BLOCK (GROUND)
16
BATTERY
7
(RED)
SOLENOID
17
WIRE COLORS
W WHITE
WB WHITE W/ BLACK STRIPE
P PURPLE
O ORANGE
OB ORANGE W/ BLACK STRIPE
PO PURPLE W/ ORANGE STRIPE
OP ORANGE W/ PURPLE STRIPE
DB DARK BLUE
B BLACK
G GREEN
R RED
Y YELLOW
YB YELLOW W/ BLACK STRIPE
RW RED W/ WHITE STRIPE
GY GREEN W/ YELLOW STRIPE
BR BROWN
BRY BROWN W/ YELLOW STRIPE
10
DELAY MODULE
9
BLADES & TRACTION RELAY
DELAY RELAY
STARTER RELAY
1
30
87A NC
87 NO
85
86
RELAY SCHEMATIC
15
SWITCH BRAKE
5
4
SEAT SWITCH
14
TRACTION CONTROL
HOUR METER
6
2
12V ADAPTER
18
AUXILLARY ELECTRICAL CONNECTION
CLUTCH SWITCH
11
KEY SWITCH
8
DELAY MODULE OPERATION & SCHEMATIC
A B C D E F
MAGNETO IGNITION
RELAY
NC
NO
OPTIONAL S2 TYPICAL BLADE SWITCH
S1 TYPICAL OPERATOR PRESENCE SWITCH
10-30 VDC
RELAY IS ENERGIZED (ENGINE OPERATES) WHEN S2 IS CLOSED (BLADE DISENGAGED) OR WHEN S1 IS CLOSED (OPERATOR IN POSITION), OR FOR APPROX. 1/2 SECOND AFTER S1 IS OPENED.

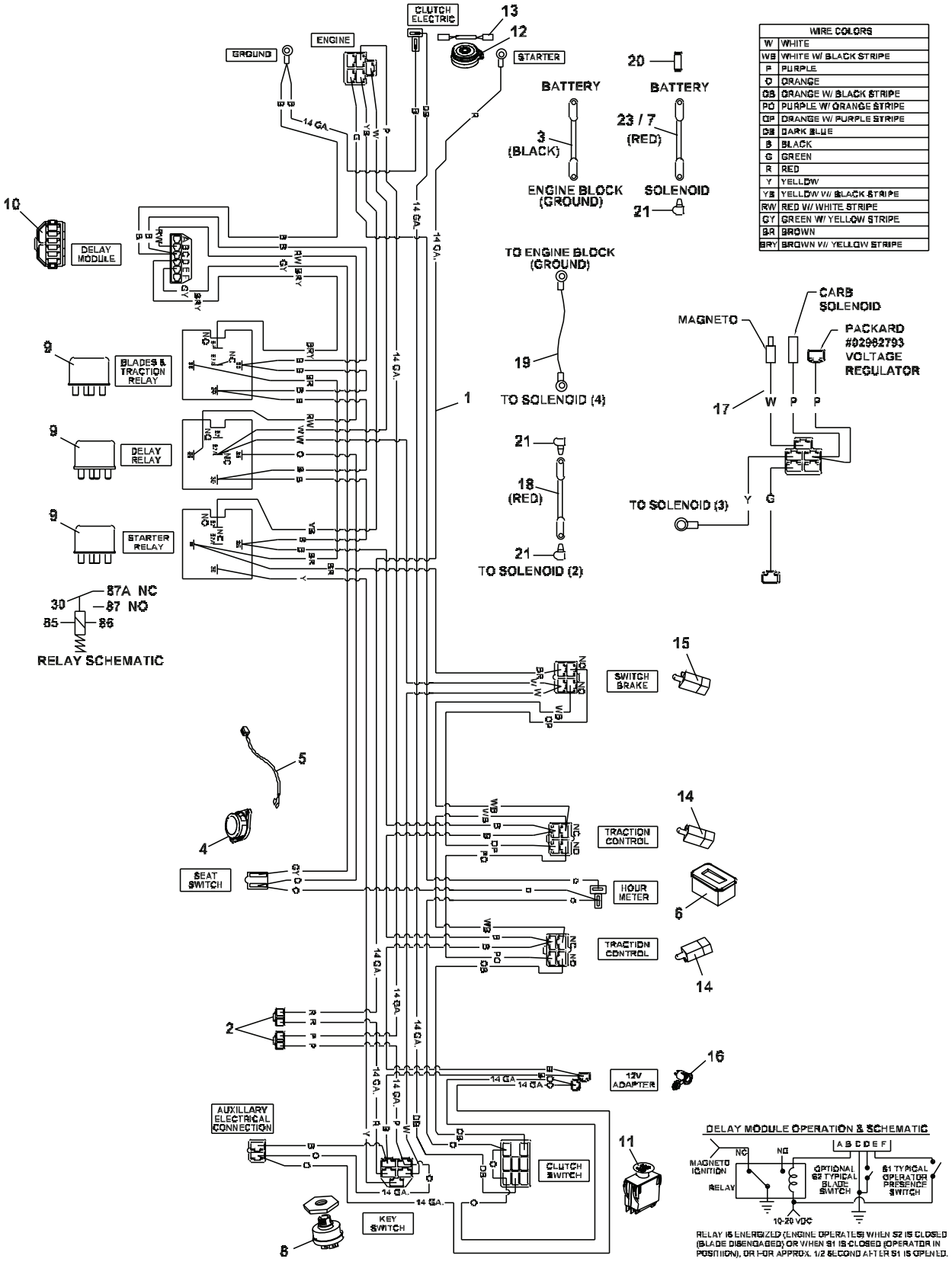
KOHLER WIRE HARNESS

FIGURE 9

ITEM	PART NO.	DESCRIPTION	QTY
9-1	4158085	HARNESS-WIRING MAIN	1
9-2	148082-20	FUSE-20 AMP	2
9-3	108061-13	CABLE-BATTERY 36 BLACK	1
9-4	4124009	SWITCH-SEAT, NO	1
9-5	4143068	JUMPER-SEAT SWITCH	1
9-6	4136792	METER-HOUR	1
9-7	2722227-02	CABLE-BATT W/CONDUIT (INCLUDES ITEMS 16 & 17)	1
9-8	128010	KEY-SWITCH	1
9-9	2722325	RELAY-40AMP SEALED	3
9-10	2188154	MODULE-DELAY	1
9-11	2721505	SWITCH-PTO	1
9-12	2721337	CLUTCH-ELECTRIC (INCLUDES 2720949 WIRE ASSY)	1
9-13	2720949	ASSY-CLUTCH WIRE	1
9-14	108208	SWITCH DBL POLE	2
9-15	2188156	SWITCH-NONO DBL POLE	1
9-16	112386	BOOT-BAT TERM POS	1
9-17	2308095	COVER-TERMINAL	1
9-18	4142266	CONNECTOR-12V	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 10


CLUTCH ELECTRIC
13
12
STARTER
ENGINE
GROUND
14 GA.
BATTERY
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BATTERY
3
(BLACK)
23 / 7
(RED)
ENGINE BLOCK (GROUND)
SOLENOID
21
WIRE COLORS
W WHITE
WB WHITE W/ BLACK STRIPE
P PURPLE
O ORANGE
OB ORANGE W/ BLACK STRIPE
PO PURPLE W/ ORANGE STRIPE
OP ORANGE W/ PURPLE STRIPE
DB DARK BLUE
B BLACK
G GREEN
R RED
Y YELLOW
YB YELLOW W/ BLACK STRIPE
RW RED W/ WHITE STRIPE
GY GREEN W/ YELLOW STRIPE
BR BROWN
BRY BROWN W/ YELLOW STRIPE
10
DELAY MODULE
TO ENGINE BLOCK (GROUND)
19
TO SOLENOID (4)
CARB SOLENOID
MAGNETO
PACKARD #02982793 VOLTAGE REGULATOR
17
W P P
9
BLADES & TRACTION RELAY
DELAY RELAY
STARTER RELAY
1
21
18
(RED)
21
TO SOLENOID (2)
TO SOLENOID (3)
Y G
30
87A NC
87 NO
85
86
RELAY SCHEMATIC
15
SWITCH BRAKE
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4
SEAT SWITCH
14
TRACTION CONTROL
HOUR METER
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TRACTION CONTROL
14
2
16
12V ADAPTER
AUXILLARY ELECTRICAL CONNECTION
CLUTCH SWITCH
11
KEY SWITCH
8
DELAY MODULE OPERATION & SCHEMATIC
A B C D E F
NC
NO
MAGNETO IGNITION
RELAY
OPTIONAL S2 TYPICAL BLADE SWITCH
S1 TYPICAL OPERATOR PRESENCE SWITCH
10-20 VDC
RELAY IS ENERGIZED (ENGINE OPERATES) WHEN S2 IS CLOSED (BLADE DISENGAGED) OR WHEN S1 IS CLOSED (OPERATOR IN POSITION), OR FOR APPROX. 1/2 SECOND AFTER S1 IS OPENED.

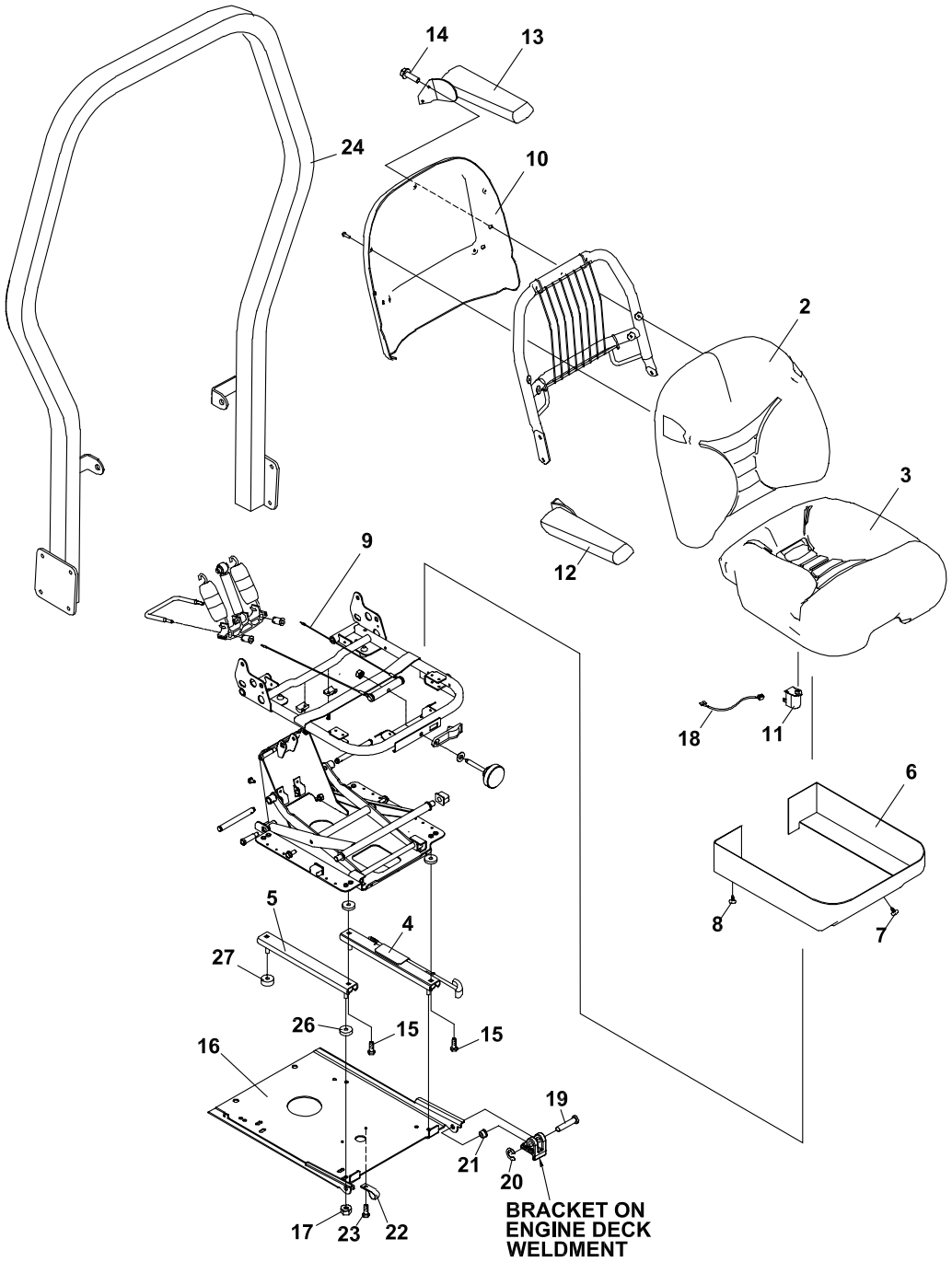
KAWASAKI WIRE HARNESS

FIGURE 10

ITEM	PART NO.	DESCRIPTION	QTY
1	4158085	HARNESS-WIRING MAIN	1
2	148082-20	FUSE-20 AMP	2
3	108061-13	CABLE-BATTERY 36 BLACK	1
4	4124009	SWITCH-SEAT, NO	1
5	4143068	JUMPER-SEAT SWITCH	1
6	4136792	METER-HOUR	1
7	2722227-01	CABLE-BATT W/CONDUIT (INCLUDES ITEMS 20 & 21)	1
	2722227-02	CABLE-BATT W/CONDUIT (USED ON 942249E ONLY - INCLUDES ITEMS 20 & 21)	1
8	128010	KEY-SWITCH	1
9	2722325	RELAY-40AMP SEALED	3
10	2188154	MODULE-DELAY	1
11	2721505	SWITCH-PTO	1
12	2721337	CLUTCH-ELECTRIC (USED ON 25HP & 27HP ONLY) (INCLUDES 2720949 WIRE ASSY)	1
	2722016	CLUTCH-ELECTRIC 19HP (USE ON 19HP MODELS ONLY) (INCLUDES 2720949 WIRE ASSY)	1
13	2720949	ASSY-CLUTCH WIRE	1
14	108208	SWITCH-DBL POLE	2
15	2188156	SWITCH-NONO DBL POLE	1
16	38665	SOLENOID	1
17	2188224	HARNESS-JUMPER (NOT USED ON 942249E MODEL)	1
18	108061-04	CABLE-BATTERY 20 RED	1
19	2188225	WIRE-GROUND	1
20	112386	BOOT-BAT TERM POS	1
21	2308095	COVER-TERMINAL	3
22	4142266	CONNECTOR-12V	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 11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BRACKET ON
ENGINE DECK
WELDMENT

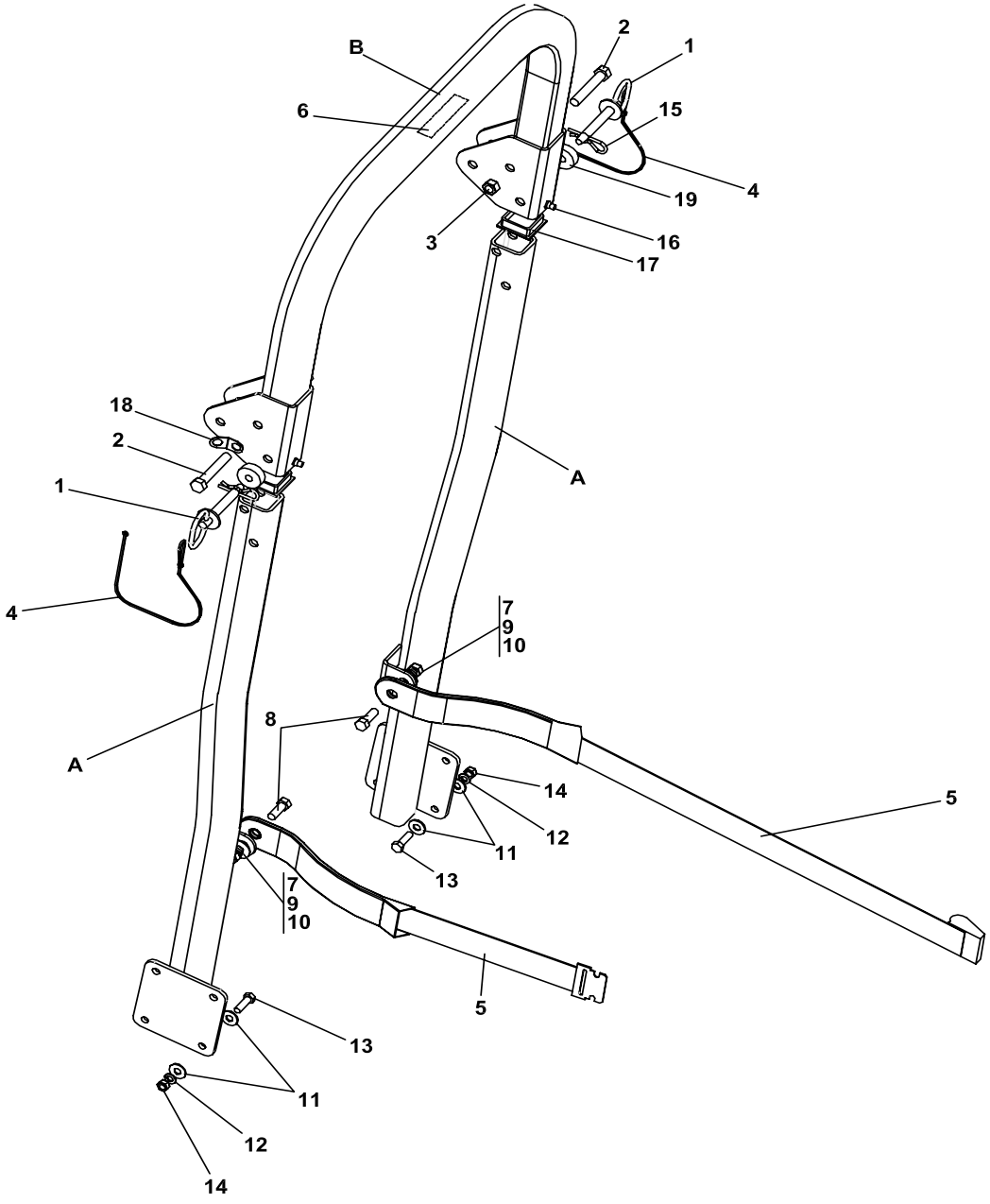
FIGURE 11

ITEM	PART NO.	DESCRIPTION	QTY
1	4122479	SEAT-SUSPENSION (INCLUDES ITEMS 2-15)	1
2	4122479-01	CUSHION-SEAT BACK	1
3	4122479-02	CUSHION-SEAT BOTTOM	1
4	4122479-03	SLIDE RAIL-ADJUSTER	1
5	4122479-04	SLIDE RAIL-SLAVE	1
6	4122479-05	SKIRT-SEAT ASSY	1
7	4122479-06	CLIP-SMALL XMAS TREE	3
8	4122479-07	CLIP-LARGE XMAS TREE	4
9	4122479-08	ASSY-CABLE	1
10	4122479-09	BACK PANEL-SEAT	1
11	4124009	SWITCH-SEAT NO	1
12	4122481	ARMREST-RH	1
13	4122480	ARMREST-LH	1
14	64123-68	BOLT-HEX 5/16-18X1	4
15	64123-54	BOLT, 5/16-18X3/4 HEX	4
16	4121386.7	PLATE-SEAT	1
17	64141-6	NUT-WLF 5/16-18	4
18	4143068	JUMPER-SEAT SWITCH	1
19	33138-09	PIN-CLEVIS	2
20	64144-30	SNAP RING	2
21	38371-01	BRG-NYLINER 3/8	2
22	48228A	CABLE CLIP-INSULATED	2
23	64152-23	SCREW 1/4-20X3/8	2
		OPTIONAL ROPS:	
24	970162	ATT-ROPS (INCLUDES ITEM 22)	
25 *	2208260	S-SEAT BELT	1
26	2720975-07	SPACER-NYLON 3/8"	2
27	2720975-09	SPACER-NYLON 1/4"	2
28*	970363	KIT-SPRING & SADDLE	1

*** NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 12



FOLDING ROPS KIT (970354)

FIGURE 12

ITEM	PART NO.	DESCRIPTION	QTY
1	4162879	PIN-HITCH 1/2	2
2	64123-31	BOLT-1/2-13 X 3	2
3	64151-7	LOCKNUT- 1/2-13	2
4	4162880	LANYARD-NYLON	2
5	4162882	SEATBELT	1
6	4160347	LABEL-WARNING ROPS	1
7	64163-19	WASHER-FLAT 7/16	2
8	64123-28	BOLT-7/16 X 1-1/4	2
9	64006-06	LOCKWASHER-7/16	2
10	64151-11	LOCKNUT-7/16	2
11	64163-31	WASHER-3/8	16
12	64006-03	LOCKWASHER-3/8	8
13	64123-16	BOLT-3/8-16 X 1-1/4	8
14	64025-05	NUT-3/8-16 HEX	8
15	64168-1	PIN-COTTER	2
16	4160343	BUMPER RUBBER	2
17	4160344	PLUG	2
18	4160348	WASHER-FORMED	2
19	4162878	WASHER-RUBBER	2

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 13

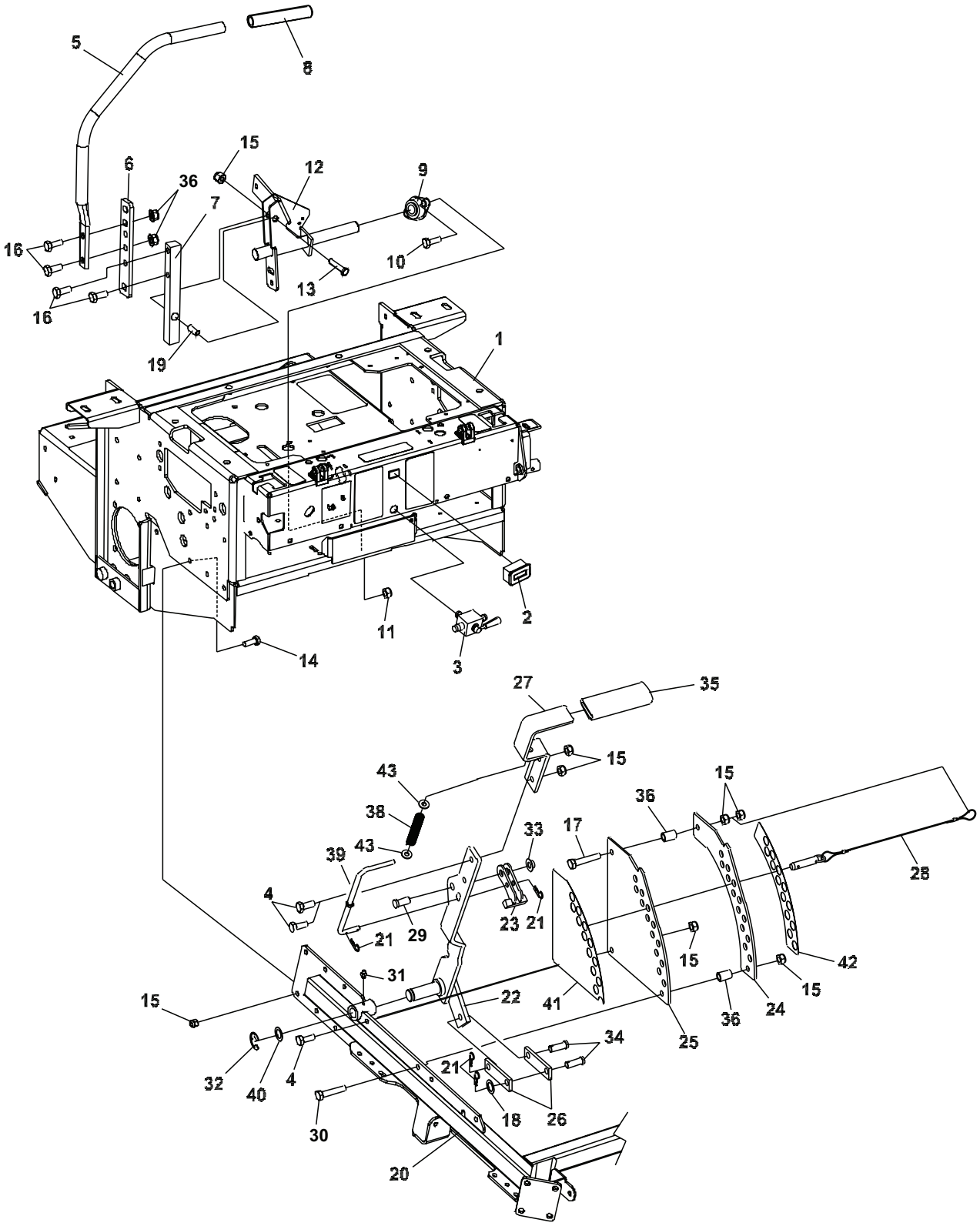

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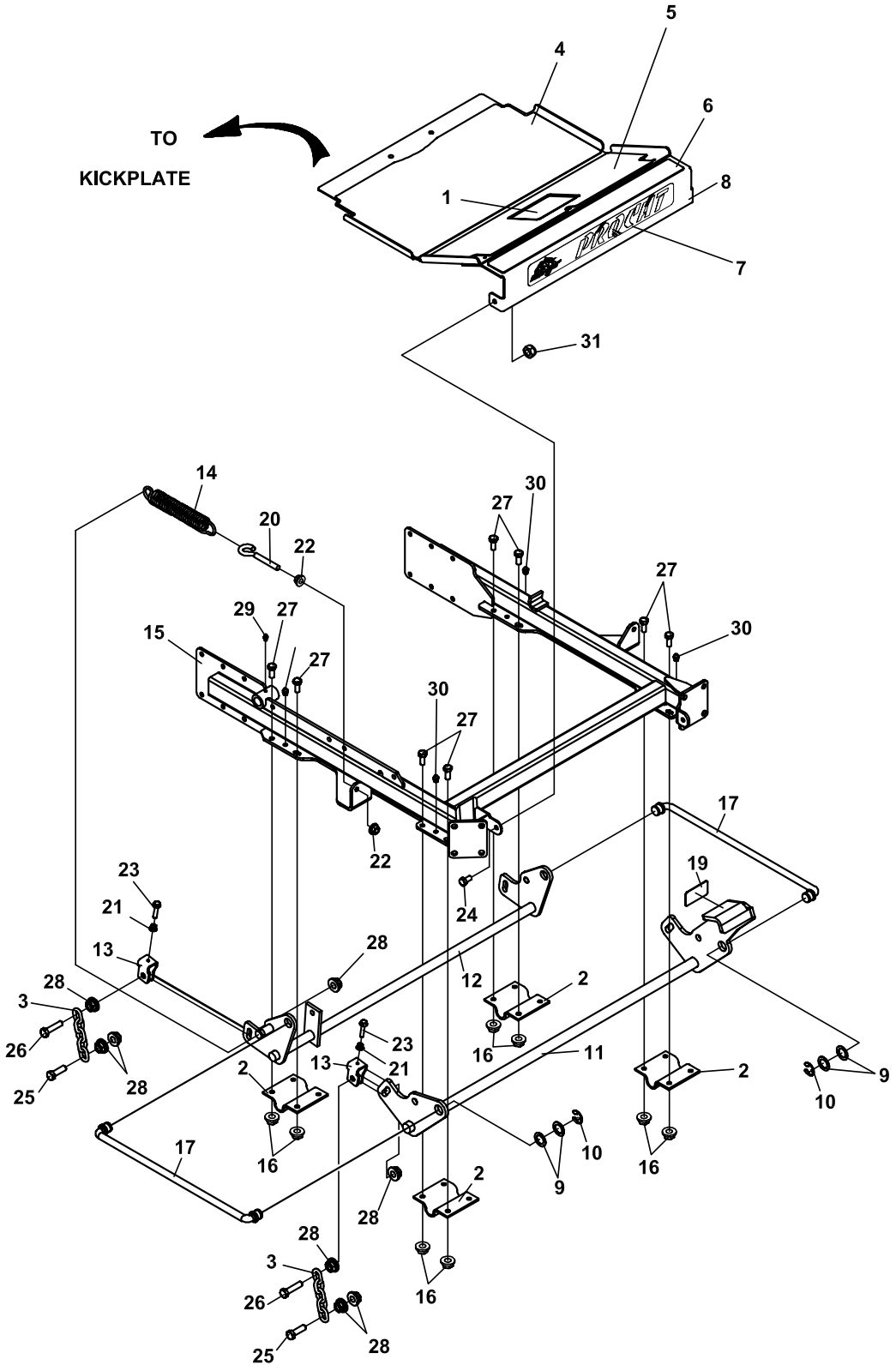
FIGURE 13

ITEM	PART NO.	DESCRIPTION	QTY
1	4136780	S ENGINE DECK W/LABS	1
2	4136792	METER-HOUR	1
3	2188161	VALVE-TANK SELECTOR	1
4	A1104057	BOLT-M10-1.50X25	3
5	4122172.7	LEVER-TRACTION CNTRL	2
6	4122173.7	BRKT-TRACTION LEVER	2
7	2183074	BRKT-HANDLE	2
8	4144705	GRIP-HANDLE	2
9	2188145	BEARING-.75ID SELF ALIGN	4
10	64123-15	BOLT-3/8-16X3/4 HEX	8
11	64141-4	NUT-WLF 3/8-16	8
12	4112105.7	WLDMT-MTN CONTRL RH	1
	*4112104.7	WLDMT-MTN CONTRL LH	1
13	64205-011	BLT-MET M10-1.50X40	2
14	A110406	SCREW,M10X1.5X30 HH	12
15	64237-03	LOCKNUT-NYLON M10-1.5	20
16	64263-013	BLT-FLG HD M10-1.5 X 30	8
17	64205-008	BLT-MET M10-1.50X55	1
18	64163-43	WSHR.443/.454X1X11GA	1
19	2183073	SPACER	2
20	4159920.7	WLDMT-CRADLE	1
21	64168-2	COTTER-HAIRPIN.08X1.19	4
22	2720551.7	WLDMT-DECK LIFT LEVER	1
23	4162904.7	WLDMT-LVR STOP LATCH	1
24	2720517.7	BRKT-INNER DECK LIFT	1
25	2720516.7	BRKT-OUTER DECK LIFT	1
26	4116590.7	BRACKET-LIFT LINK	2
27	2720501.7	HANDLE-LIFT ARM	1
28	4159060	ASSY, PIN & LANYARD	1
29	64188-53	PIN-CLEVIS 1/2X1.0	1
30	64205-052	BLT-MET M10-1.5X50	1
31	85010N	ZERK, 1/4-28 STR SELF TH	1
32	64221-04	E-RING .875	1
33	64175-05	NUT-PUSH 1/2	1
34	64188-36	PIN, CLEVIS 7/16X1-1/4	2
35	2188143	GRIP	1
36	2183071-03	SPACER-15.88X10.32X24	2
37	64265-05	NUT-FL NYL LOCK M10-1.5	4
38	2720544	SPRING-COMPRESSION	1
39	4159284	ROD-LIFT STOP	1
40	64163-65	WSHR .890X1.375X18GA	3
41	2720742	LBL-ZT200 HT CUT OUTER	1
42	2720743	LBL-ZT200 HT CUT INNER	1
43	64163-29	WASHER-21/64 X 1 X 11GA	2

*** NOT ILLUSTRATED**

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 14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KICKPLATE
PRO-CUT
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CRADLE ASSEMBLY

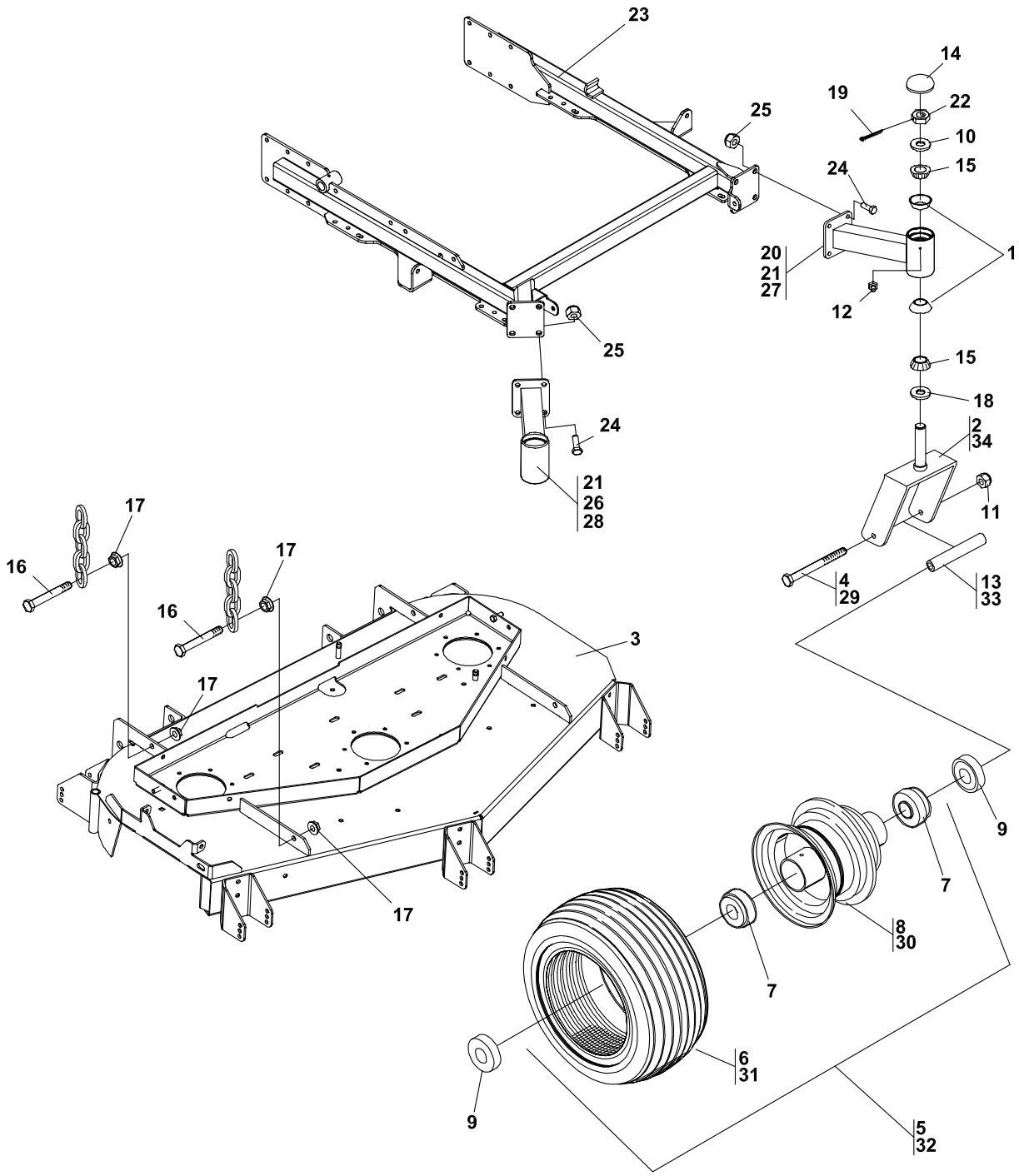
FIGURE 14

ITEM	PART NO.	DESCRIPTION	QTY
1	4118843	LABEL-WARNING	1
2	2182356.7	BRACKET-SHAFT HANGER	4
3	2188127	CHAIN-6.35 (.250) 5 LINKS	4
4	4139065	MAT-FOOT PLATE LOWER	1
5	4129955	MAT-FOOT PLATE MIDDLE	1
6	2721861	MAT-FOOT PLATE UPPER	1
7	4157861	LABEL-PROCAT	1
8	4109780	S-FOOT PLATE (BOBCAT) (INCLUDES ITEMS 4-7)	1
9	64163-65	WASHER-.890X1.375X18GA	8
10	64221-04	E-RING.875	4
11	4159283.7	WLDMT-DECK LIFT, FRONT	1
12	2722559.7	WLDMT-DECK LIFT, REAR	1
13	2722630	CLIP-DECK HEIGHT ADJ	4
14	2722719	SPRING-DECK LIFT (NOT USED ON 48" DECKS)	2
15	4159920.7	WLDMT-CRADLE	1
16	64265-05	NUT-FL NYLN LCK M10-1.5	15
17	4109960	WLDMT-DECK LIFT ROD	2
18 *	4111842.7	BRKT-SPRING ANCHOR LH	1
19	4139785	MAT-FOOT LIFT	1
20	4113682	ROD-SPRING MOUNT	2
21	64141-2	NUT-WLF 1/4-20	4
22	64141-4	NUT-WLF 3/8-16	4
(ITEMS 18, 19, 20 & 22 NOT USED ON 48" DECKS)			
23	64197-020	BLT-TDFM 1/4-20X1-1/2	4
24	64205-007	BLT MET M10-1.50X20	2
25	64205-029	BLT-MET M12X1.75X40	4
26	64205-060	BOLT-MET M12-1.75X50	4
27	64263-013	BLT-FLG HD M10-1.5 X 30	15
28	64246-04	NUT-WHIZ M12-1.75	16
29	85010N	ZERK, 1/4-28 STR SLFTHRD	1
30	85051	ZERK-1/8 PIPE	6
31	64237-03	LOCKNUT-NYLON M10-1.5 (USED ON 48" ONLY)	2

ITEM	PART NO.	DESCRIPTION	QTY

***NOT ILLUSTRATED**

FIGURE 15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CRADLE & CASTER ASSEMBLY

FIGURE 15

ITEM	PART NO.	DESCRIPTION	QTY
1	48043-03C	CUP, OUTER BEARING	4
2	2721306.7	WLDMT-CASTER YOKE	2
3		DECK/W LABS	
4	64123-215	BOLT-HEX 3/4-10X7 1/2	2
5	2722228	WHEEL-13X5.00-6 ASSY	2
	(INCLUDES ITEMS 6-8)		
	(USED ON 48" & 52" DECKS ONLY)		
6	2720475-01	TIRE-13X5.00-6 SMOOTH	1
7	2722228-03	BEARING	2
8	2722228-01	RIM-13"ASSY W/VALVE	1
9	2722231	SPACER-END	4
10	64163-26	WASHER	2
11	64229-07	LOCKNUT-NYLON 3/4-10	2
12	85010N	ZERK, 1/4-28 STR SLF THD	2
13	2722230-02	SPANNER-13" WHEEL	2
	(USED ON 48" & 52" DECKS ONLY)		
14	2188135	DUST COVER	2
15	48043-04C	CONE, OUTER BEARING	4
16	64205-029	BLT-MET M12X1.75X40	4
17	64246-04	NUT-WHIZ M12-1.75	8
18	48480	SEAL CR 12411	2
19	64140-5	COTTER PIN	2
20	2722399.7	WLDMT-CSTR ARM 52L	1
	(USED WITH 52" DECKS)		
21	2722398.7	WLDMT-CSTR ARM 52R/61L	1
22	64025-20	NUT-HEX 3/4-16 SLOT U	2
23	4159920.7	WLDMT-CRADLE	1
24	A1105061	BOLT-M12-1.75X30	8
25	64237-06	LOCKNUT-NYLON M12-1.75	8
26	4113902.7	WLDMT-CASTER ARM 61R	1
	(USED WITH 61" DECKS)		

ITEM	PART NO.	DESCRIPTION	QTY
27	2722401.7	WLDMT-CASTER ARM 48 LH	1
28	2722400.7	WLDMT-CASTER ARM 48 RH	1
	(USED WITH 48" DECKS)		
29	64123-223	BOLT-3/4-10 X 10	2
30	2722326-02	RIM ASM-W/VALVE STEM	2
31	2722326-01	TIRE-13X6.50-6 SMOOTH	2
33	2722326	ASSY-WHL 13X6.5-6	2
	(INCLUDES ITEMS 7, 31 & 32)		
33	2722230-03	SPANNER	2
34	2722452.22	WLDMT-CASTER YOKE	2
	(ITEMS 29-34 USED ON 61" DECKS)		

FIGURE 16

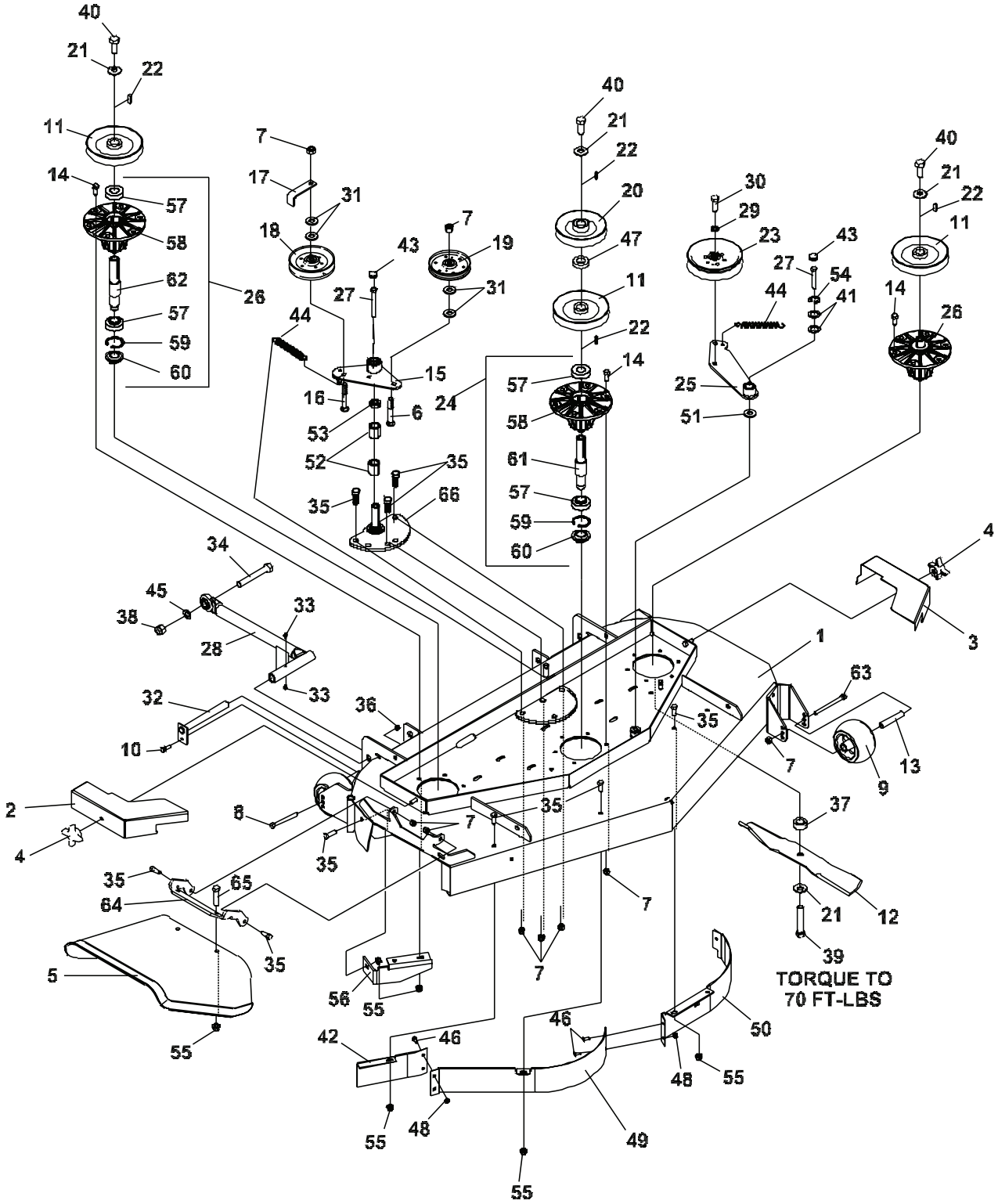

FIGURE 16

ITEM	PART NO.	DESCRIPTION	QTY
1	4154060	S-48INCH DECK W/LABELS	1
2	4127853.2	COVER-BELT RH 48	1
3	4127852.2	COVER-BELT LH 48	1
4	38524	KNOB-4 PRONG 3/8-16	2
5	4147115	CHUTE-RUBBER ASSY	1
6	64018-5	BLT-CRG 3/8-16X1-3/4	1
7	64229-03	LOCKNUT NYLON 3/8-16	28
8	64123-173	BLT-HEX 3/8-16X4-1/2	2
9	2721512	ROLLER-5X2.75 CENTERED	3
10	64123-68	BOLT-5/16-18 X 1 HEX	2
11	2308140	PULLEY ENGINE	3
12	112111-01	BLADE 16.25 OFFST HLFT	3
13	2720685	SPACER-ROLLER	3
14	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18
15	4163028	ASSY-IDLER ARM PTO	1
16	64018-18	BOLT-CARRIAGE 3/8-16X2	1
17	2302125.7	GUIDE-BELT	1
18	48393	PULLEY, V IDLER	1
19	38297	IDLER, 5.0 OD FLNGD	1
20	2228034	PULLEY-5.25 DEEP GRV	1
21	64209-03	SPRING WSHR .67 ID	6
22	64164-12	1/4X1/4X1 SQ END KEY	4
23	128169	PULLEY, IDLER 5.50	1
24	4115849	S-ASSYSPNDL ZT200 CNTR (INCLUDES ITEMS 57-61)	1
25	4129075	ASSY-DECK IDLER 48-52 (INCLUDES ITEMS 41, 51, 53 & 63)	1
26	4115850	S-ASSYSPNDL ZT200 OUTR (INCLUDES ITEMS 57-60 & 62)	2
27	64270-02	BOLT-HEX M10-1.5x30 ISO CL10.9	2
28	4133155.7	WLDMT-PUSHBAR	2
29	64006-05	LOCKWSHR-HELICAL 1/2	1
30	64123-05	BLT-HEX 1/2-20X1-1/2	1
31	64163-46	WASHER.383/.393X.88X7	4
32	2186125	WLDMT-LOCK, PUSHBAR	2
33	85010N	ZERK, 1/4-28 STR	5
34	64123-152	BLT-HEX 5/8-11X5	2
35	64123-50	BOLT-HEX 3/8-16X1	11
36	64229-02	LOCKNUT-NYLON 5/16-18	2
37	4118314	SPACER-BLADE 16MM	3
38	64229-06	LOCKNUT, NYLON 5/8-11	2
39	64123-187	BLT-HEX 5/8-18X3.75	3
40	64123-208	BLT-HEX 5/8-18X1.5	3
41	4128004	BEARING	3
42	4134342.7	BAFFLE-RIGHT FRONT 48	1
43	4128002	END CAP	1

ITEM	PART NO.	DESCRIPTION	QTY
44	2188131	SPRING-EXTENSION	2
45	64163-73	WSHR-.625IDX1.12ODX.06	A/R
46	64018-2	BLT-CRG 1/4-20X3/4	4
47	64163-64	WSHR 1.015X1.500X14	1
48	64229-01	LOCKNUT-1/4-20 NYLON	4
49	4134336.7	BAFFLE-FRONT CTR 48	1
50	4120175.7	BAFFLE-48 FRONT LH	1
51	4127999	SEAL	1
52	4163155	INNER RING	2
53	4163014	SPACER	1
54	64144-40	SNAP RING	2
55	64268-03	NUT-FL NYLN LOCK 3/8-16	9
56	4120208.7	BAFFLE-DISCHARGE 32-48	1
57	38348-01	BEARING-SPINDLE SEALED	6
58	2721096	HOUSING-SPINDLE 6 HOLE	3
59	64144-38	SNAP RING	3
60	38315	NUT-SPINDLE	3
61	2183070-01	SHAFT-SPINDLE LONG (USED ON 4115849 CENTER SPINDLE ONLY)	1
62	2183070-02	SHAFT-SPINDLE (USED ON 4115850 OUTER SPINDLE ONLY)	2
63	64018-30	BOLT-CRG 3/8-16 X 4-1/2	1
64	4149017.7	HINGE-CHUTE RUBBER	1
65	64262-013	BLT-FLG HD 3/8-16 X 1-1/2	2
66	4163030.7	WLDMT-IDLER PIN	1

FIGURE 17

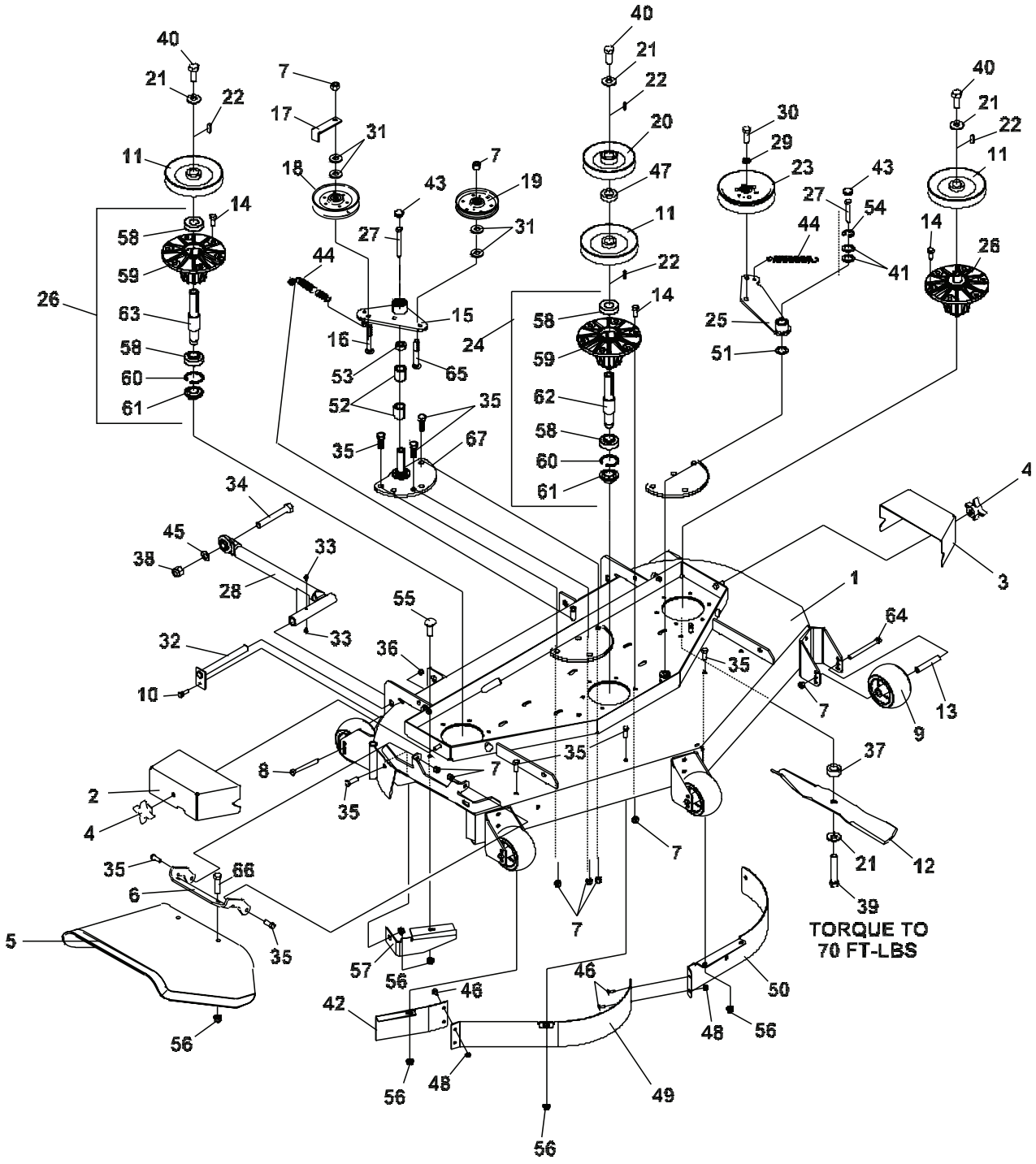

FIGURE 17

ITEM	PART NO.	DESCRIPTION	QTY
1	4154185	S-52INCH DECK W/LABELS	1
2	2722574.2	COVER-BELT RH	1
3	2722575.2	COVER-BELT LH	1
4	38524	KNOB-4 PRONG 3/8-16	2
5	4147115	CHUTE-RUBBER ASSY	1
6	4149017.7	HINGE-CHUTE_RUBBER	1
7	64229-03	LOCKNUT NYLON 3/8-16	35
8	64123-173	BLT-HEX 3/8-16X4-1/2	2
9	2721512	ROLLER	6
10	64123-68	BOLT-HEX 5/17-18X1	2
11	2308140	PULLEY ENGINE	3
12	112111-02	BLADE 18.00 OFFST HLFT	3
13	2720685	SPACER-ROLLER	6
14	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18
15	4163028	ASSY-IDLER ARM PTO	1
16	64018-18	BOLT-CARRIAGE 3/8-16X2	1
17	2302125.7	GUIDE-BELT	1
18	48393	PULLEY, V IDLER	1
19	38297	IDLER, 5.0 OD FLNGD	1
20	2228034	PULLEY-5.25 DEEP GRV	1
21	64209-03	SPRING WSHR .67 ID	6
22	64164-12	1/4X1/4X1 SQ END KEY	4
23	128169	PULLEY, IDLER 5.50	1
24	4115849	S-ASSYSPNDL ZT200 CNTR (INCLUDES ITEMS 58-62)	1
25	4129075	ASSY-DECK IDLER 48-52 (INCLUDES ITEMS 41, 51, 43 & 54)	1
26	4115850	S-ASSYSPNDL ZT200 OUTR (INCLUDES ITEMS 58-61 & 63)	2
27	64270-02	BOLT-HEX M10-1.5x30 ISO CL10.9	2
28	4133155.7	WLDMT-PUSHBAR	2
29	64006-05	LOCKWSHR-HELICAL 1/2	1
30	64123-05	BLT-HEX 1/2-20X1-1/2	1
31	64163-46	WASHER.383/.393X.88X7	4
32	2186125	WLDMT-LOCK, PUSHBAR	2
33	85010N	ZERK, 1/4-28 STR SLF THD	5
34	64123-152	BLT-HEX 5/8-11X5	2
35	64123-50	BOLT-HEX 3/8-16X1	12
36	64229-02	LOCKNUT-NYLON 5/16-18	2
37	4118314	SPACER-BLADE 16MM	3
38	64229-06	LOCKNUT, NYLON 5/8-11	2
39	64123-187	BLT-HEX 5/8-18X3.75	3
40	64123-208	BLT-HEX 5/8-18X1.5	3
41	4128004	BEARING	3
42	4134343.7	BAFFLE-RT FRT 52-54	1
43	4128002	END CAP	2
44	2188131	SPRING-EXTENSION	2
45	64163-73	WSHR-.625IDX1.12ODX.06A/R	
46	64018-2	BLT-CRG 1/4-20X3/4	4
47	64163-64	WSHR 1.015X1.500X14	1
48	64229-01	LOCKNUT-1/4-20 NYLON	4
49	4134338.7	BAFFLE-FRT CTR 52-54	1
50	4118427.7	BAFFLE-FRONT LH	1
51	4127999	SEAL	1
52	4163155	INNER RING	2
53	4163041	SPACER	1
54	64144-40	SNAP RING	2
55	64018-3	BOLT-3/8-16X1 CARRIAGE	1
56	64268-03	NUT-FL NYLN LOCK 3/8-16	8
57	4115864.7	BAFFLE-DISCHARGE	1
58	38348-01	BEARING-SPINDLE SEALED	6
59	2721096	HOUSING-SPINDLE 6 HOLE	3
60	64144-38	SNAP RING	3
61	38315	NUT-SPINDLE	3
62	2183070-01	SHAFT-SPINDLE LONG (USED ON 4115849 CENTER SPINDLE ONLY)	1
63	2183070-02	SHAFT-SPINDLE (USED ON 4115850 OUTER SPINDLE ONLY)	2
64	64018-30	BOLT-CRG 3/8-16 X 4-1/2	3
65	64018-5	BLT-CRG 3/8-16X1-3/4	1
66	64262-013	BLT-FLG HD 3/8-16 X 1-1/2	2
67	4163030.7	WLDMT-IDLER PIN	1
68 *	64123-217	BLT-HEX 3/8-16X4-1/4 CTR	1

*** NOT ILLUSTRATED**

FIGURE 18

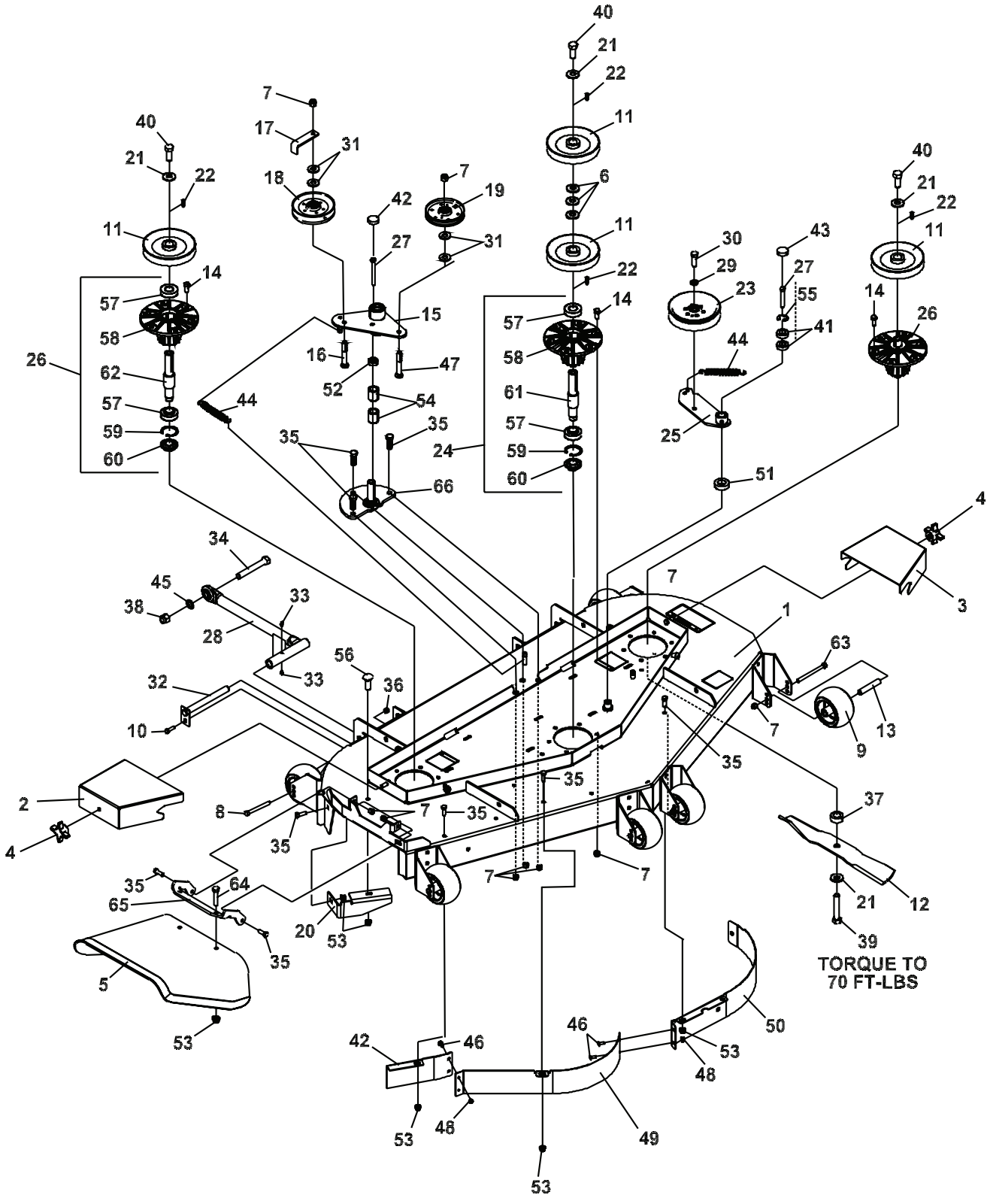

FIGURE 18

ITEM	PART NO.	DESCRIPTION	QTY
1	4145000	S-61" DECK	1
2	2182352.2	BELT COVER RH	1
3	2182351.2	BELT COVER LH	1
4	38524	KNOB-4 PRONG 3/8-16	2
5	4147399	CHUTE-RUBBER ASSY	1
6	64163-64	WSHR-1.015X1.500X14GA	3
7	64229-03	LOCKNUT NYLON 3/8-16	34
8	64123-173	BLT-HEX 3/8-16X4-1/2	2
9	2721512	ROLLER-5X2.75 CENTERED	7
10	64123-68	BOLT-HEX 5/16-18X1	2
11	2308140	PULLEY ENGINE	4
12	112111-03	BLADE 21.00 OFFST HLFT	3
13	2720685	SPACER-ROLLER	7
14	64262-012	BLT-FLG HD 3/8-16 X 1-1/4	18
15	4163028	ASSY-IDLER ARM PTO	1
16	64018-18	BOLT-CARRIAGE 3/8-16X2	1
17	2302125.7	GUIDE-BELT	1
18	48393	PULLEY, V IDLER	1
19	38297	IDLER, 5.0 OD FLNGD	1
20	4115864.7	BAFFLE-DISCHARGE	1
21	64209-03	SPRING WSHR .67 ID	6
22	64164-12	1/4X1/4X1 SQ END KEY	4
23	128169	PULLEY, IDLER 5.50	1
24	4115849	S-ASSYSPNDL ZT200 CNTR (INCLUDES ITEMS 57-61)	1
25	4129076	ASSY-DECK IDLER 61" (INCLUDES ITEMS 41, 43, 51 & 55)	1
26	4115850	S-ASSYSPNDL ZT200 OUT (INCLUDES ITEMS 57-60 & 62)	2
27	64270-02	BOLT-HEX M10-1.5X30 ISO CL10.9	2
28	4133155.7	WLDMT-PUSHBAR	2
29	64006-05	LOCKWSHR-HELICAL 1/2	1
30	64123-05	BLT-HEX 1/2-20X1-1/2	1
31	64163-46	WSHR.383/.393X.88X7	4
32	2186125	WLDMT-LOCK, PUSHBAR	2
33	85010N	ZERK, 1/4-28 STR SLF THD	5
34	64123-152	BLT-HEX 5/8-11X5	2
35	64123-50	BOLT-HEX 3/8-16X1	12
36	64229-02	LOCKNUT-NYLON 5/16-18	2
37	4118314	SPACER-BLADE 16MM	3
38	64229-06	LOCKNUT, NYLON 5/8-11	2
39	64123-187	BLT-HEX 5/8-18X3.75	3
40	64123-208	BLT-HEX 5/8-18X1.5	3
41	4128004	BEARING	3
42	4134344.7	BAFFLE-RIGHT FRONT	1
43	4128002	END CAP	2
44	2188131	SPRING-EXTENSION	2
45	64163-73	WSHR-.625IDX1.12ODX.06A/R	
46	64018-2	BLT-CRG 1/4-20X3/4	4
47	64018-5	BLT-CRG 3/8-16X1-3/4	1
48	64229-01	LOCKNUT-1/4-20 NYLON	4
49	4134340.7	BAFFLE-FRONT CTR 61	1
50	4117663.7	BAFFLE-FRONT LH	1
51	4127999	SEAL	1
52	4163016	VALVE, IN-LINE FUEL FILTER	1
53	64268-03	NUT-FL NYLN LOCK 3/8-16	10
54	4163155	INNER RING	2
55	64144-40	SNAP RING	2
56	64018-3	BOLT-3/8-16X1 CARRIAGE	1
57	38348-01	BEARING-SPINDLE SEALED	6
58	2721096	HOUSING-SPINDLE 6 HOLE	3
59	64144-38	SNAP RING	3
60	38315	NUT-SPINDLE	3
61	2183070-01	SHAFT-SPINDLE LONG (USED ON 4115849 CENTER SPINDLE ONLY)	1
62	2183070-02	SHAFT-SPINDLE (USED ON 4115850 OUTER SPINDLE ONLY)	2
63	64123-217	BLT-HEX 3/8-16X4-1/4	5
64	64262-013	BLT-FLG HD 3/8-16 X 1-1/2	2
65	4149017.7	HINGE-CHUTE RUBBER	1
66	4163030.7	WLDMT-IDLER PIN	1

FIGURE 19

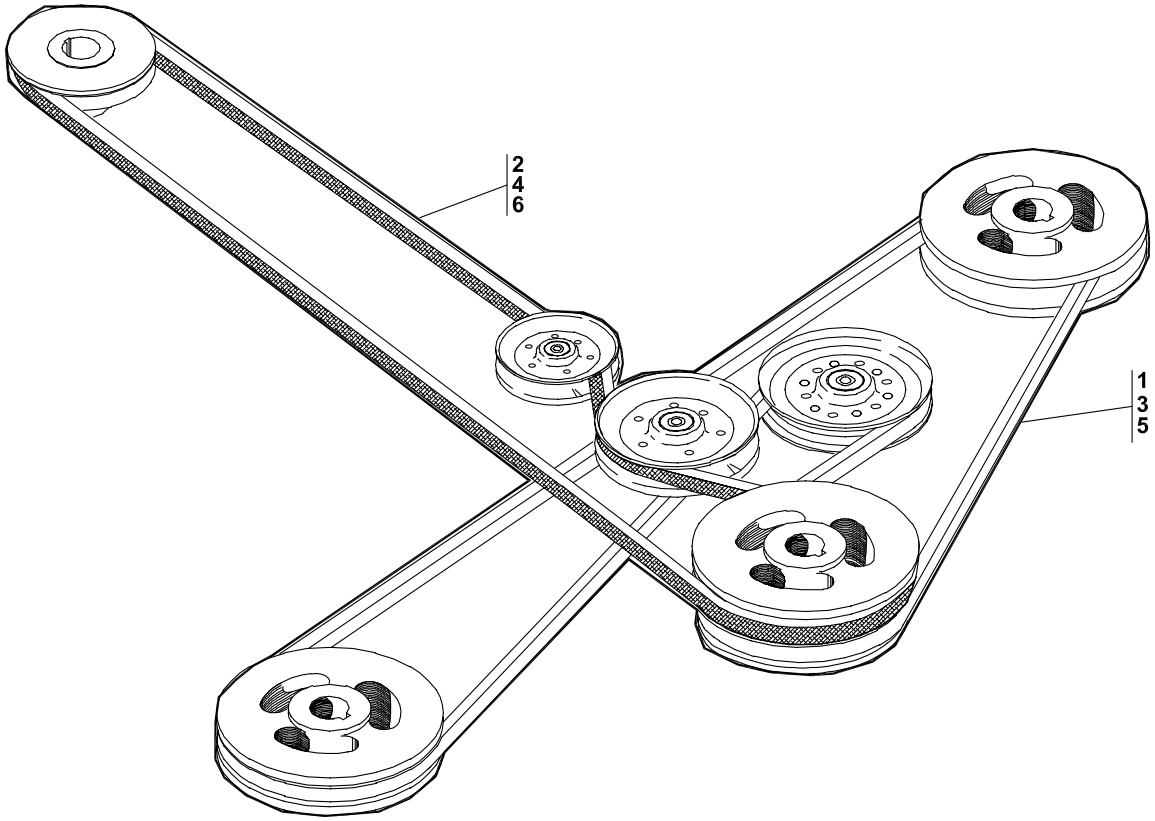

FIGURE 19

ITEM	PART NO.	DESCRIPTION	QTY
1	2188176	BELT-CUTTERDECK 54	1
2	2720815	BELT-PTO 54 (USED ON 52" SD DECK)	1
3	128003	BELT-CUTTERDECK 61	1
4	2188134	BELT-PTO 61 (USED ON 61" SD DECK)	1
5	128110	BELT-CUTTERDECK 48	1
6	2720815	BELT-PTO 48 (USED ON 48" DECK)	1

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 20

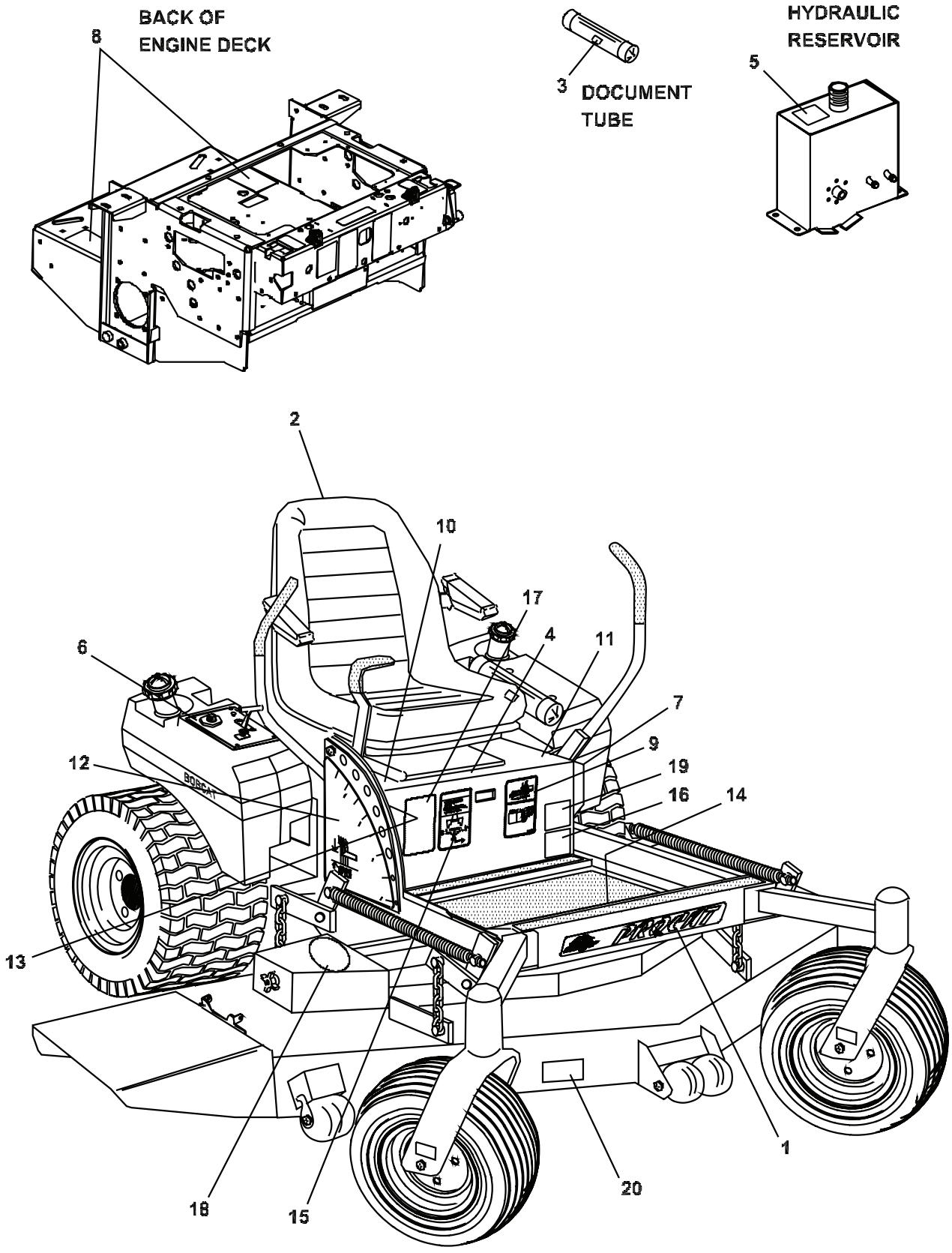
BACK OF
ENGINE DECK
8
3
DOCUMENT
TUBE
HYDRAULIC
RESERVOIR
5
2
10
17
4
11
6
7
9
12
19
16
14
13
1
18
15
20

FIGURE 20

ITEM	PART NO.	DESCRIPTION	QTY
20-1	4157861	LABEL-PROCAT	1
20-2	4158401	LABEL-BOB-CAT, 10.5"	1
20-3	2000735	LABEL-OPER MAN	1
20-4	2000590	LABEL, WARN BATTERY	1
20-5	2000691	LABEL - HYDR OIL FILL	1
20-6	4156160	LABEL-CONTROL PANEL	1
20-7	2000693	LABEL - PARK BRAKE	1
20-8	2000698	LABEL(DBL) - FUEL/LEAKS	2
20-9	4114158	LABEL-TIRES	1
20-10	2000700	LABEL - RH TRACTION	1
20-11	2000701	LABEL - LH TRACTION	1
20-12	2720742	LABEL-HT CUT OUTER	1
20-13	2720743	LABEL-HT CUT INNER	1
20-14	4118843	LABEL-WARNING	1
20-15	2000706	LABEL-FUEL	1
20-16	4116761	LABEL-MADE IN USA	1
20-17	340830	DECAL-CAUTION SPANISH	1
20-18	4163037	LABEL-DURADECK	1
20-19	4162919	LABEL-19HP	1
	4162920	LABEL-21HP	
	4162921	LABEL-25HP	
	4162923	LABEL-27HP	
20-20	4162915	LABEL-DECK SIZE, 52"	1
	4162916	LABEL-DECK SIZE, 61"	
	4162914	LABEL-DECK SIZE, 48"	

ITEM	PART NO.	DESCRIPTION	QTY

FIGURE 21

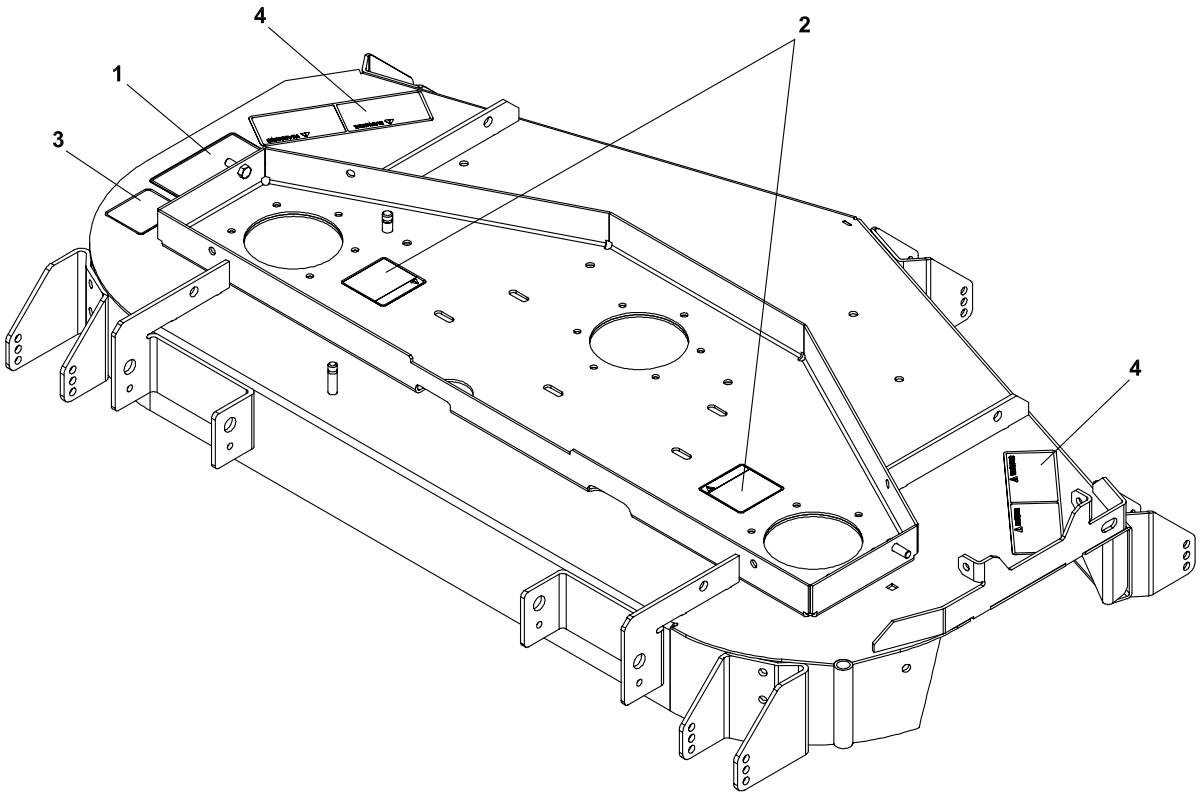

FIGURE 21

ITEM	PART NO.	DESCRIPTION	QTY
21-1	2000572	LABEL-WARNING BLADES	1
21-2	2000577	LABEL-WARNING	2
21-3	2000696	LABEL-BLADE INSTALL	1
21-4	2000677	LABEL-DANGER/WARNING	2

ITEM	PART NO.	DESCRIPTION	QTY

COMMERCIAL GROUNDS CARE, INC.
ONE BOB-CAT LANE
P.O. BOX 469
JOHNSON CREEK, WI 53038
920-699-2000
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BOB-CAT BUNTON RYAN STEINER

CGC
Commercial Grounds Care, Inc.